ON-LINE CATALOGUE SYSTEM

A SELECT ANNOTATED BIBLIOGRAPHY

DISSERTATION

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Ref. No.____ Dated September 06, 1994

This is to certify that the M.L. & I.Sc. dissertation of Mr. Md. Nurul Islam on " On-Line Catalogue System : A select annotated bibliography " was compiled under my supervision and guidance.

(Mohd. Sabir Husain)
Professor & Chairman

DEDICATED TO MY FATHER

ANISUR RAHAMAN

WHO HAS ALWAYS BEEN A SOURCE OF INSPIRATION TO ME

CONTENTS

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Md. Nurul Islam

(MD. NURUL ISLAM)

INTRODUCTION TO BIBLIOGRAPHY

As the literature in various subject fields increased due to information explosion, literature searches became more and more laborious and time-consuming. For carrying out literature searches users/readers used to spend a number of hours and days in Libraries and Information Centres, scanning through periodicals, reports, patents etc. undertelling are very tedious job. For reducing this difficulty, this present work in the form of an annotated bibliography is the result of a continuous and constant attempt of searching all significant literature available about On-line Catalogue system. Although this bibliography is select in nature, an attempt has been made to cover all aspects of the topic as comprehensively as possible.

METHODOLOGY

The study includes a select annotated bibliography of articles on the topic. The articles were originally published in journals. To collect material on the topic, only primary sources were consulted. The title of the journals used for compiling bibliography are listed as in separate heading **"LIST OF JOURNALS AND ABBREVIATIONS"**

SUBJECT HEADING

Attempt has been made to give co-extensive subject heading as much as possible. It will facilitate the reader to find out desired articles from this bibliography.

An humbel effort has been made to follow postulates and principles as suggested by Dr. S.R. Ranganathan in the formulation of subject headings; these are arranged strictly by the principle of alphabetical sequence.

STANDARD FOLLOWED

Care has been taken striclty to follow the rules and practices of the Indian Standard for Bibliographical References (**IS : 2381-1963**) for each entry of the bibliography. Thus it gives an uniformity for the bibliographical references throughout this select bibliography. The Classified Catalogue Code (CCC) of Dr. S.R. Ranganathan have followed for choice and rendering of authors and headings.

ARRANGEMENT

An entry is preceded by subject heading in capitals. The entry begins with Entry Element (i.e. surname) of the author in capitals, followed by secondary element (i.e. forename) within paranthesis and then the title of the article, after this, the title of the periodical (in

abbreviated form), its volume number, issue number, year, month of publication after which, are geven the pages of the article.

The item of bibliographical reference for each entry contains the following information :-

a. Name(s) of author(s)

b. Full stop(.)

c. Title of contribution including subtitle, if any

d. Full stop (.)

e. Title of the periodical

f. Full stop (.)

g. Volume number

h. Coma (,)

i. Issue number

j. Semi-colon (;)

k. Year of publication

l. Coma (,)

m. Month

n. Semi-colon (;)

o. Inclusive pages of article

SPECIMAN ENTRY

118. PULIS (Noelle V) and LUDY (Lorene E). Subject searching in an On-line Catalog with authority control. Coll Res Lib. 49, 6; 1988, Nov; 523-33.

ABSTRACT

The entries in the bibliography contain abstracts giving the essential information about the articles. Attempts have been made to prepare indicative abstract, so that in most of the cases users needs are fulfilled with abstract itself.

INDEX

The index part contains list of the subject heading, an author index and title index. The index have been arranged letter-by-letter method. Each entry followed by entry number. It is hoped that it will be found very useful in consultation of the bibliography.

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LIST OF JOURNALS AND ABBREVIATIONS

	Title of Journals(s)	Abbreviation Used	Country/Place of Publication
	'A'		
1.	Aslib Proceedings.	Aslib Proc.	London
	'B'		
2.	Bulletin of the Medical Library Association.	Bul Med Lib Ass.	Chicago
	'C'		
3.	Cataloguing and Classification Quarterly.	Cata Class Q.	New York
4.	College & Research Library.	Coll Res Lib.	Chicago
5.	Community & Junior College Libraries.	Comm Jr Coll Lib.	U.S.A.
	'E'		
6.	Elsevier International Bulletins.	Els Int Bul.	U.S.A.
	'F'		
7.	Information Technology and Libraries.	Inf Tech Lib.	Chicago

	Title of Journal(s)	Abbreviation	Country/Place of Publication
	'J'		
8.	Journal of Academic Librarianship.	J Aca Libr.	U.S.A.
9.	Journal of Documentation.	J Doc.	London
10.	Journal of Librarianship.	J Libr.	London
	'L'		
11.	Library and Information Science Research Report.	Lib Inf Sc Res Rep.	London
12.	Library Journal.	Lib J.	New York
13.	Library Resources and Technical Services.	Lib Reso Tech Serv.	Chicago
14.	Library Review.	Lib Rev.	Glasgow
15.	Library Trends.	Lib Tre.	Chicago
	'P'		
16.	Public Library Journal.	Pub Lib J.	London
	'S'		
17.	Science and Technology Libraries Journal.	Sc Tech Lib.	U.S.A.

	Title of Journal(s)	Abbreviation	Country/Place of Publication
18.	Show me Libraries.	Sh me Lib.	.S.A.
19.	Special Libraries.	Sp Lib.	ew york

'T'

20.	Technical Services Quarterly.	Tech Serv Q.	U.S.A.

ABBREVIATIONS OF MONTH

Jan	:	January
Feb	:	February
Mar	:	March
Apr	:	April
May	:	May
Jun	:	June
Jul	:	July
Aug	:	August
Sept	:	September
Oct	:	October
Nov	:	November
Dec	:	December
Spr	:	Spring
Win	:	Winter
Sum	:	Summer

****

PART - ONE

INTRODUCTION TO SUBJECT

CATALOGUE : FROM TABLET TO AUTOMATED FORM

The story of catalogues and cataloguing is only one phase of the broad panorama of library development. The word "catalog" is the Greek phrase katalogos. The kata means "by" or "according to" and logos means sometimes "word", sometimes "order", and other times "reason".

The term cataloging refers to the process of preparing entries for a catalogue. Compatibility of cataloguing records in the catalogues of different libraries facilities services to users who move from library to library.

One of the oldest lists of books of which we have knowledge occurs on a Sumerian tablet found at Nippur and dated about 2000 B.C. A number of catalogue in the form of tablets have come to light.

Throughout the different centuries, improvement is seen in library lists/catalogues.

The British Museum cataloguing Rules (B M) also known as Panizzi's ninety one rules, were developed in 1839 as a guide for the compilation of the British Museum catalogues. It reflects the functions of these particular catalogues as inventory lists and finding lists.

Chales Cutter has contributed very significantly when published his rules for a Dectionary Catalogue in 1876. It covering rules for descriptive cataloguing, subject headings and filing. he formulated objectives which are as follows :-

1. To enable a person to find a book of which either :

   (a) the author
   (b) the title is known.
   (c) the subject

2. To show what the library has :

   (d) by a given author
   (e) on a given subject
   (f) in a given kind of literature

3. To assist in the choice of a book :

   (g) as to its edition (bibliographically)
   (h) as to its character (literary or topical)

Ranganathan tried to apply scientific method to cataloguing practice and formulation of rules for a catalogue code. The result was the formulation of normative principles of cataloguing, called canons of cataloguing. Ranganathan's Theory of Library Cataloge published in 1938.

The first edition of Ranganathan's classified catalogue code (C C C) was published in 1934 . Ranganathan

also broughout a Dictionary Catalogue Code, the first edition of which was published in 1945.

The International conference on cataloguing principles organized by IFLA (International Federation of Library Associations and Institute) held in Paris in 1961, brought together leading cataloguers, teacher of cataloguing and others interested in cataloguing. The deliberations of the conference led to the principles of cataloguing generally. Thus the conference tried to achieve acceptance of uniform cataloguing practices. This conference has been an important landmark.

At present, IFLA in association with Unesco and other organization is working towards a worldwise system for the organized exchange of bibliographic information. This project is called Universal Bibliographic Control (U B C). Its two major aims are to catalogue each item only once and make available promptly bibliographic information for all publications in an internationally accepted form . UBC program is complementary to that of UNISIST. Both are closely related.

The Anglo-American Cataloguing Rules (AACR-1), published in 1967 in two editions (North American edition and the British edition), has exerted considerable influence on cataloging practices in various parts of the world

especially Englishspeaking world. This code come out as a result of the co-operative efforts of the American Library Association, the Library of Congress, the Library Association (Great Britain), and the Canadian Library Association.

AACR - 2 appeared in 1978 by the co-operative efforts of Canada, UK and USA. This is an important achievement. It provides an integrated approach, which can serve as a uniform basis for recording of every known type of "print and non-print" material. Also, it is claimed that this code will able to meet the requirements of materials which might be invented in future. So, it is claimed that this code will take cataloguing into twenty-first century.

A computer is an extremely rapid and accurate filing and printing device. For this data (catalogue entries) is fed into the computer. The store of computer retains the information. As and when required data for additional catalogue entries to be interfiled with sequence of entries is fed into the computer. The output may be in the form of a hard copy or a microfilm or any other form.

A computer itself can also be used as a catalogue, that is, the information can be stored withing computer and kind of entries required can be got as and when required.

For this purpose, the computer can be interegated directly. Here the access may be provided via a terminal or visual display unit (V D U).

As a result of the developments in the application of computer ae being increasingly used for the preparation of catalogues in card, book, microfilm or megnetic tape forms. This emphasizes the need for standardization. Standardization is also essential for achieving successful and convenient international exchange of bibliographic information in written as well as machine-readable form. ISBD (M) Ist standard edition 1974, is likely to be revised soon. AACR has been revised to conform to this standard. This standard has been adopted for use in over 20 national bibliographies and translated into over 14 languages.

ISBD (M) : International standard bibliographic description (M) specifies requirements for the description of printed publications. It has listed elements to be included in the descriptive part of an-entry and prescribes the order of elements and system of punctuation marks to separate elements. It introduces a system of standard punctuation marks, with which even a user unfamiliar with the language of description can at least

identify the different elements.

Library of Congress has emerged as global centre for collection and transmission of cataloguing data from similar other centres in other countries by means of shared cataloguing program under program of Acquisitions and Cataloguing (NPAC). Creation of machine-readable data under MARC (Machine-Readable Cataloguing) project has been an important development. In December 1974, Library of Congress started a pilot study on Co-operative Machine-Readable Cataloguing (COMARC). The aim was to study the feasibiltiy of expanding LC bibliographic services by accepting the machine-readable cataloguing records of other libraries.

The introduction of automation in libraries, documenttion centres and bibliographic agencies has stimulated a great deal of interest in rules and practices for bibliographic filing. At present, many of the libraries and information centres are in the process of converting or thinking of converting their large files into machine-readable data files.

The developments described above have implications for catalogue codes, theory and practice of cataloguing. These all need throughout revision keeping in view of the

latest development that are taking place with the result that a new automated cataloguing system have come into being and an on-line catalogue is of such development.

******

REFERENCES :-

1. CHAN (L M) : Cataloging and Classification : An introduction. p. 11-23.

2. GIRJA KUMAR and KRISHAN KUMAR. Theory of Cataloguing. Ed.5. p. 352-75.

3. STROUT (R F). Toward a better Cataloguing Code. p. 4-25.

4. ENCYCLOPEDIA OF library and information science. Vol.4; p. 242-98.

ON-LINE SYSTEM

INTRODUCTION

The history of information retrieval systems are clearly defined into several periods. Before the 1940s the only information retrieval system were of a purely manual type : indexes and catalogs in card and printed form. These retrievl devices are pre-co-ordinate and nonmanipulative. The invention of retrieval systems that are post co-cordinate and manipulative introduced in 1940s.

The first computer-based retrieval system were introduced in 1950s, and experimental work on on-line information retrieval dates back at least to 1963. The major off-line system emerged in the 1960s and the wide spread conversion to the on-line made of operation is a development of the 1970s.

OFF-LINE

It relates to "batch mode" operating without direct and continuous communication with the main computer system. This system offered significant advantages over their predecessors, including :

(i) To provide multiple access points conveniently and economically.

(ii) To conduct many searches simultaneously.

(iii) To generate printed output, including interfaces with devices for photocomposition and for computer-output-microfilm (COM).

(iv) To offer multiple products or services (e.g., printed indexes, SDI, restropective search) from a single intellectual input and a single clerical input.

(v) To monitor its own operation and to produce various types of management information.

(vi) To conduct "complex" searches involving many terms in various logical combinations.

(vii) To produce a data base in machine-readable form in magnetic tape, that can easily be duplicated and shipped to other information centres, thus facilitating the development of network and co-operative ventures.

The off-line, batch-processing systems also have associated disadvantages. They are essentially "one chance" searching systems in which the searcher has to think in advance of all possible search approaches and to construct a search strategy that, when matched with the data base, is

likely to retrieve all the relevant literature.

A second disadvantage of the off-line system is the fact that the search results are substantially delayed. It is not possible to get an immediate response from such a system.

A third disadvantage is that the search in an off-line system will generally be a search of delegated nature. That is, the individual who needs information must delegate the responsibility for preparing the searching strategy to some information specialist and has no opportunity to conduct his own search.

On-line retrieval systems have all the advantages that apply to computer-based systems in general, as listed earlier, but avoid all of these major disadvantages.

ON-LINE

The term "on-line" refers to the fact that the searcher is in direct communication ("on-line to") the data base he wishes to interrogate and to the computer on which this data base is loaded. In simple language an on-line system is one in which there is direct communication with the central processing unit of a computer, allowing an operator to "converse" directly with the computer and receive an almost immediate response to a

message or instruction. A search is conducted as a two-way conversation between the searcher and the system (computer). Each takes turns to communicate with the other. The interaction between searcher and system is effected through some form of terminal connected to the computer through communications lines.

These terminals are of two principal types : typewriter terminals and video terminals. The interactive typewriter terminal closely resembles a conventional typewriter. The searcher uses the keyboard to communicate with the system and the system's response is also recorded on the paper output of searcher's terminal. In the case of video terminal the searcher also communictes by means of a keyboard. Both the searcher's messages and the system's messages are displayed on a viewing screen resembling that of a domestic television receiver. This viewing device is likely to be a conventional cathode ray tube (C R T) display. For information retrieval purposes, it will be necessary to supplement a video terminal with an adjocent printing device capable of recording on paper anything displayed on the viewing screen.

There are no real restrictions to this communication in terms of distance. A terminal may be in the same building as the computer facility, or in the same

complex of buildings, or it may be several thousand mile away. A terminal connected to the computer by cable, via communication Sattellite. So, it is possible for an Indian scientist to make use of a data base loaded on a computer in the United States. A simple schematic diagram concerning computer communication network, capable of supporting an on-line retrival system, is shown below as figure - 1.

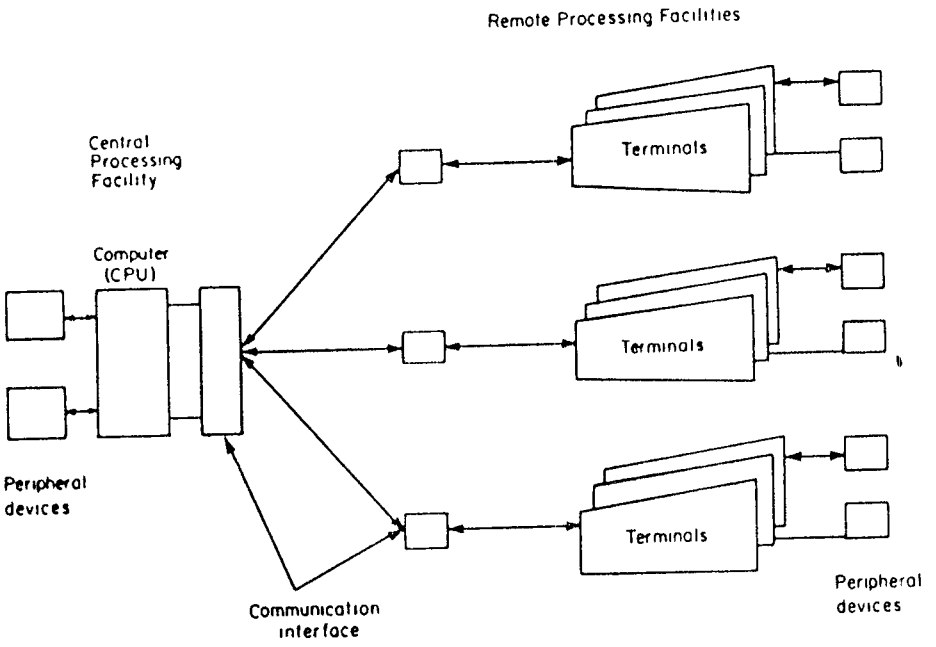

FIGURE 1 : Schematic representation of a computer communications network.

TECHNOLOGIES

Following technologies are contributing to the success of on-line service :

(a) Powerful time-sharing computers;

(b) Machine-readable data bases;

(c) Fast-access dise storage devices;

(d) Interactive retrieval programs;

(e) Fast, low cost computer terminals;

(f) Telecommunications networks;

ONLINE SEARCHING OF DATABASES

The term 'Online Information Retrieval' refers to the interactive searching of commercially available databases mounted on a mainframe computer (host computer) accessible to remote users through telex and microcomputer based systems.

The databases producers, such as The Institution of Electrical Engineers (INSPEC) and Chemical Abstracts Service (CA SEARCH) provide data in machine-readable form to agencies called 'Database Vendors' such as DIALOG, BRS, STN, etc. The vendors offer these databases for searching by the public after entering into an agreement with them. The customer pays the cost of the information retrieved. The databases are periodically updated by the database producers/vendors.

DIALOG Information Service is the world's leading online information search system (vendor), and stores more

than 260 million records on its computers at Palo Alto, California, U.S.A. These records constitute more than 350 databases covering information on almost all disciplines, such as :

1. Science & Technology
2. Social Sciences
3. Literature & Humanities
4. Energy & Environment
5. Defence
6. Arts & Culture
7. Law & Market Research
8. Agriculture & Allied Sciences

The steps involved in getting access to DIALOG are as follows:

- Filling up of 'ORDER FORM-A' for STANDARD SERVICE;
- Once the order form is accepted by 'DIALOG' Service the user has to abide by the terms and conditions of the Service;
- After entering into contract, a "PASSWORD" is sent to the user; and
- Searching can be done once the "PASSWORD" is received.

The DIALOG databases can be accessed from India using either telex or telephone lines through personal computers (PCs). In the case of PC-based systems, a terminal emulation software (communication software), such as Procomm or X-talk is required. The following equipment is required for accessing the online databases.

1. **Telex Access**

   (a) Telex Machine

   (b) Telex Line

2. **PSTN Access** (through telephone line)

   Hardware

   - IBM PC/XT/AT or compatible computer
   - 256K of RAM (minimum)
   - DOS 3.0 or above
   - Two floppy drives. However, one floppy drive and one hard disk is recommended
   - Monochrome or colour monitor
   - CGA/EGA/VGA graphics adaptor
   - Printer
   - Modem (Internal/External)

   Software

   Any asynchronous communication software compatible with the user's computer.

STEPS INVOLVED IN SEARCHING

1. **Direct Distant Dialing**

- Switch on computer and modem;
- Load communication software;
- Set communication parameters;
- Dial the host computer number (001-415-858-0511);
- Press 'Enter' key after getting the CONNECT message;
- Enter DIALOG at "Enter Service" prompt;
- The user will get the search prompt "?".

2. **Through GPSS** (Gateway Packet Switching Service)

- Switch on computer and modem;
- Load communication software;
- Set comminication parameters;
- Dial local/remote PAD Number;
- After getting CONNECT message wait for "*";
- Enter NUI number; and
- You will get the search prompt "?".

(Search steps are shown in Annexure-I)

3. **Search Strategy**

The formulation of search strategy forms the core of the entire search system. The cost of the database searching

and also the usefulness of the service depends on the effectiveness of the search strategy. The process is as follows :

- Obtain the search request on the prescribed form;
- Analyse the query with the help of thesaurus, secondary and/or primary publication on the subject;
- Use an indexing model for arranging the concepts;
- Interact with the user scientists; and
- Refine the search strategy in the light of discussions held with the user scientist.

COST OF SEARCHES

The search cost break-up is as follows :

1. **Direct Cost**

- Connect-time cost;
- Comminication cost; and
- Print cost (offline/online)

2. **Indirect Cost**

- System cost;
- Information repackaging cost; and
- Administrative overheads.

Annexure -1

Type AT & press 'Return' Key

System will show OK on screen

DIAL 3712220 (GPSS New Delhi Number)

If connected, response will be

'Procomm online to GPSS' (appears on the screen)

Then 'RELIABLE' (appears on the screen)

Message will be : WELCOME
TO GPSS
ND PAD
CONTACT
DUTY
OFFICE
FOR
COMPLAINTS
353062
343247
Type N nui-ADDRESS
Type user password and user number of GPSS

Then star will come '*' (appears on the screen)
Wait for response and response will be 'COM'

Then message will be : Wui/gateway : Please log in : +++ 1' (appears on the screen)

Then type : DIALOG (on ++++)

Then you will see on the screen : XXXXXXX

Enter user No. : User No. of DIALOG

Then you will see on the screen : ????????

Then you type password on ??? : Password

Then welcome message of the DIALOG will appear on the screen and then : ? (will appear on the screen)

This ? means System is ready to accep database file : ' '

Then type : ? begin 47 (47 is the database file number)

It will set all the parameters for Search and it will ask for query in the form of sets for searching database. As soon as you will enter query, it will search results.

After search is completed then come out from the database and log off

Then System will show the

Search cost details.

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REFERENCES :-

1. CHAN (L M). Cataloging and Classification : An introduction. p. 4-5.

2. ENCYCLOPEDIA OF library and information science. Vol. 20; p. 394-405.

ON-LINE CATALOGUE

The present era is an era of information explosion in various fields of knowledge, which have forced the libraries and information centres to find alternative ways to provide relevant information for their users in the minimum possible time. This is possible in proper way only by on-line system in searching process of operations with particular mention to Cataloging.

The function of the on-line catalogue is intended to supplant the card catalogue. The basic purpose of the on-line catalogue is restricted to bibliographic information. It can tell the user if the library has a book is supposed to be located.

USERS ENVIRONMENT

The on-line catalogue has two different kinds of impact. For all who visit the library, it is a different sort of catalogue, with a keyboard screen, and a new way of searching that replaces in active trays of cards.

This will have a different impact to creats with the growing proportion of library users whose working environments have changed to include routine use of computers. For these persons, the option of remote access to

the library's catalogue has constituted an important new concept of library service. The second impact is selective and enhancement of service for those whose work habits and equipment help them to take benefit of library automation to improve library service within the library.

The people have moved to a personal computing environment for their work. They neeed the arrangement of online access to the online catalogue, on-line bibliographies and any other on-line resources.

AUTOMATIC SDI

The SDI (Selective Dissemination of Information) is the notification to library users of selected, newly receive topics relevant to their personal interests. The SDI is a well-established practice in small and specialized libraries but it is rarely used in large libraries. The idea of SDI has found new currency outside of libraries as information filtering. The development of electronic mail and on-line library catalogue can be combined to provide automatic SDI. Implementing this service would build on desperate, existing investments in e-mail systems, telecommunications networks and an on-line catalogue.

SOFTWARE

This system operates in menumode where the user/reader is guided by information given by a series of

menus/lists. Menus are self instructive and very easy to use. Originally,the screen is divided into three horizontal sections The top portion of lines display system status, the central major part of the screen displays output form the computer and at the bottom few lines are for options.

It is in the COBOL language and could be implemented on IBM PC/AT/ XT with 20 MB Disk.

In the first stage, the software is developed for the creation of the on-line catalogue and is divided into four modules as follows :-

(i) Entry modul

(ii) Query search

(iii) Reports module

(iv) Maintenance module

(i) **Entry module :-** This module is used for :

(a) Data entry

(b) Updation of fields in the database

(c) Recreation of inverted database

The format of the menu/list is given below :

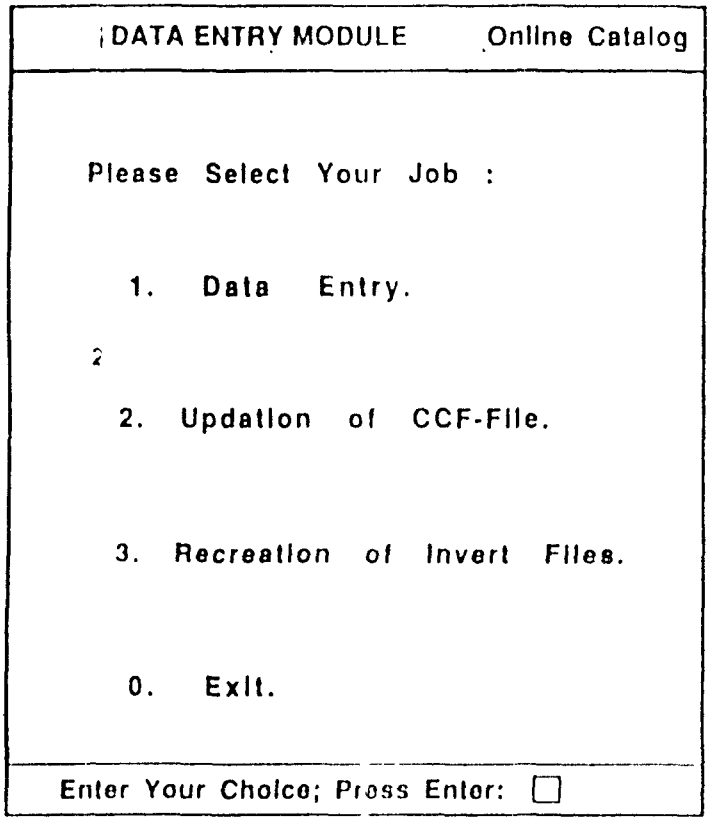

FIGURE 2.

(ii) **Query search** : This module use for :-

(a) Authors last name

(b) Descriptorwise

(c) Report/Patent numberwise

The format of the menu/list is as follows :-

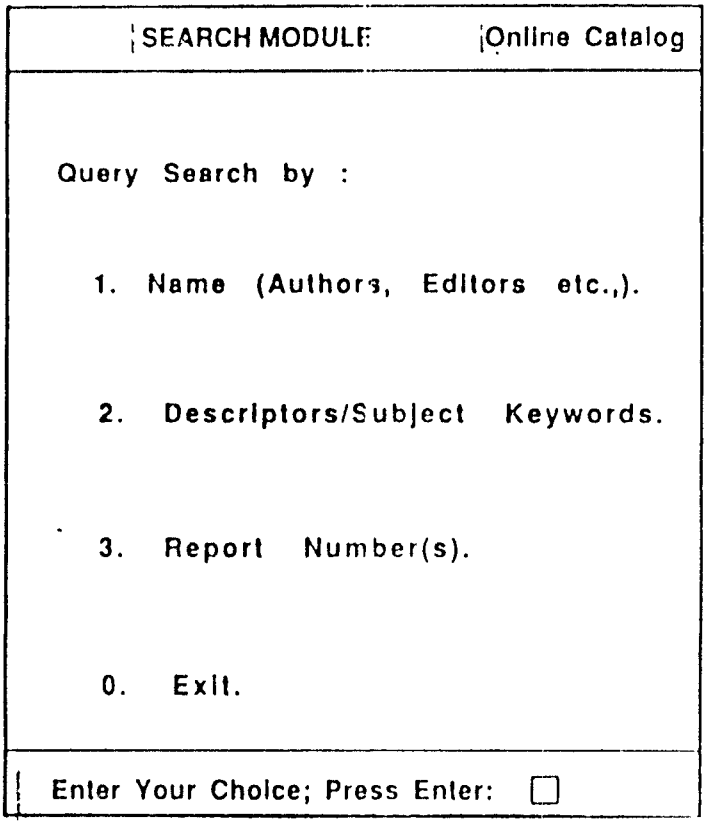

FIGURE 3.

(iii) **Reports module :-** The user/searcher can generate two types of reports by using this module;

(a) Accession list

(b) Catalogue prints

The format of menu/list is given below :-

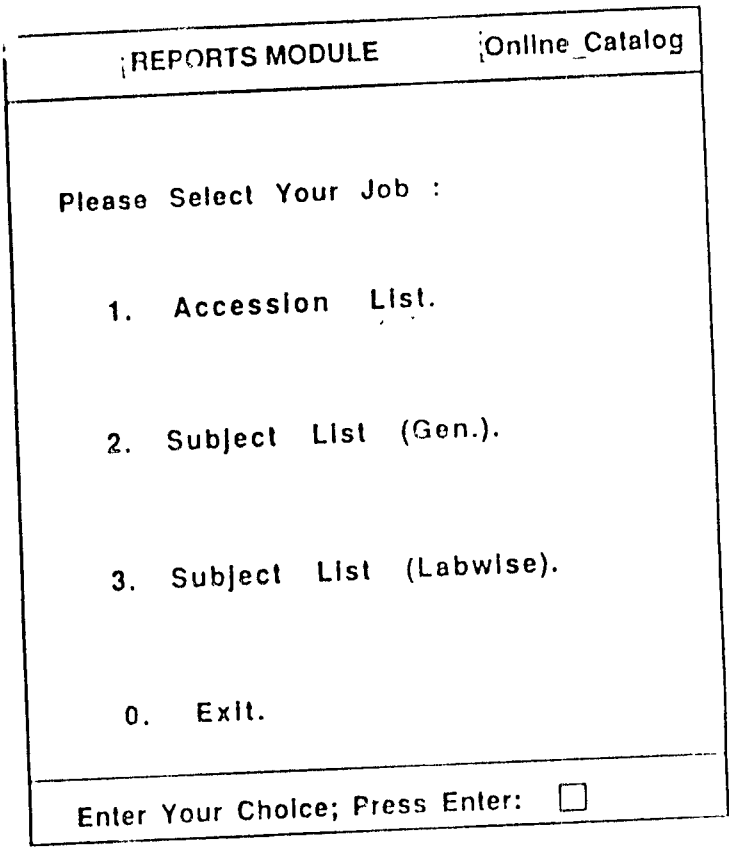

FIGURE 4.

(iv) **Maintenance module :-** This module is used for:-

(a) Resetting of the year counter

(b) Backup the CCF files

(c) Restoring of records from other places through a drive.

The format of the menu/list is given below :

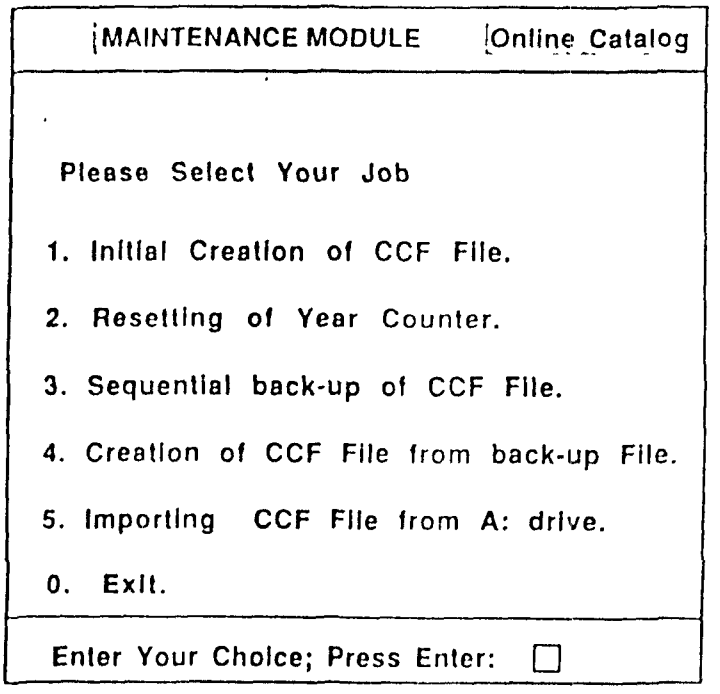

FIGURE 5.

FORMATTED DOWNLOADING

Library users/readers, have developed personal computing environment, primarily for word processing, for the very same kind of work that generates library use. Dial-in access to library catalogues is standard, and standard

communications software allows for the catalogue is to be downloaded. Identifying individual records with in the downloaded stream of characters and distinguishing the author, title and other fields within the downloaded records actually needs laborious editing.

HIGH SPEED

In on-line catalogue high speed networks and increasing numbers of workstations are coming into use. The MELVYL system, is an example, for currently downloads records at no more than around one record per second at not more than around one record per second in off-peak periods and more slowly during busy periods. For downloading a set of six hundred records for further analysis in a workplace takes at least ten minutes and possibly much longer. Use of the Internet, work stations, and the Z 39.50 search and retrieve protocol will depend on higher downloading speeds.

CORDLESS TELECOMMUNICATIONS

The card catalogue only be used in one place, and an enormous advantage of an on-line catalogue is that it can be used any where telecommunications can reach. The need for electrical power and telecommunications cables to reach the terminal is very costly and is search is a constraint. The

library users/readers to carry small, portable, battery-powered note book computers that are very useful in library use. Obviously, it will help the library users/readers with portable computers to use the online catalongue without needing to connect to a telephone line. Cordless telephones or radio transmission of data packets will give an efficient service.

HOW TO SEARCH

The search strategies involve the use of (i) headings (ii) keywords, (iii) Boolean operators, and (iv) mixed approaches.

(i) **Headings :** There are two extreme approaches to search methods in on-line catalogues and variety of techniques in between. At one extreme, subject headings are searched from left to right, much as a user might find them arranged in the card catalogue. The most rigorous version require users to enter LC subject headings exactly as they would appear on a catalog card, including punctuatioin and spacing : one mistake, zero hits.

This approach presents different problems. Firstly, the subeject terms entered by the user may not correspond to the controlled vocabulory of the subject heading system. This problem can be introduced by an authority control system,

will in some cases direct the user from the terms entered to the vocabulary actually used in the catalog. However, the searcher may use terms that are valid modifiers or subdivisions, but never appear in the first position in a heading. In these cases, the authority control system may sometimes be of help, and we might be reassured that at least the user is no worse off than when using the card catalog.

If we want to improve subject searching, then we shoudl take little consolation in that point. Consider the various locations of the word "library" in these headings, extracted from records in the University of California on-line catalog in the following figure.

Search request : FISU LIBRARIES

Search result : 2411 records at UC libraries

Public libraries - Addresses, essays, lectures.

Data libraries - United States Directories

Libraries, University and Colleges - Administration - Statistical methods - Case studies.

Acquisition (Libraries)

Karachi - (Pakistan) - Libraries

FIGURE 6 : Some Subject Headings Using "Libraries"

(ii) **Keywords** : - The designers may attempt to solve the problems of heading-based searching by providing keyword searching. In this approach, an index entry is made for each significant word in the indexed fields, rather than just one entry for the entire heading. The user's terms will retrieve records regardless of where the terms appear in the heading with a keyword search technique. Keyword indexing results in much larger indexes, increasing disk storage and computer capacity requirements. From the searcher's point of view, the cost of keyword searching is in the form of very large retrievals and numerous "false drops", where the user's search term retrieves records using the term with a different meanings. We may referred earlier to two different meanings of the word "film". In the following figure for example, is a heading on X-ray films; the book it references deals with the economics of medical radiology and prospects for recycling silver from used X-ray films. This figure also contains a heading having to do with the preservation of photographic film. A searcher entering the term "film" in a keyword system will retrieve records involving all these meanings of the word "film" as well as those scientific and technological texts having to do with thin films and the like.

Search request : FISU FILM#

Search result : 748 records at UC libraries

Moving-picture film collections - Washington (D.C.)

Safty film - Preservation

Radiography - Films

Metalic films

Thin films - Optical properties.

FIGURE 7 : Uses of the word "Film" in LC subject headings.

(iii) **Boolean Operators :-** Using Boolean logic or logical search operators, viz. AND OR and NOT. Using these operators, searcher can combine keywords to expand or limit results, or to search multiple indexes simulataneously. This system must be designed to guide searchers find information that they can use to conduct the search, and it should be recalled that Boolean logic is not necessarily human logic : there is some evidence that catalog users, applying Boolean operators as if they were English conjunctions, wind up applying them incorrectly

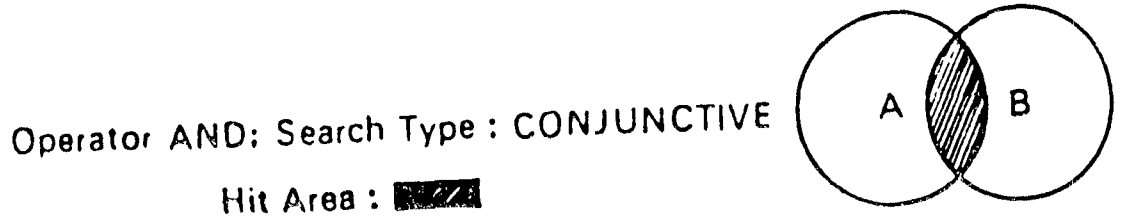

FIGURE 8.

Operator OR; Search Type : ADDITIVE

Hit Area :

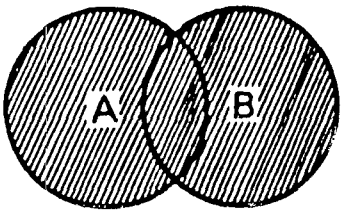

FIGURE 9.

Operator NOT; Search Type : SUBTRACTIVE

Hit Area :

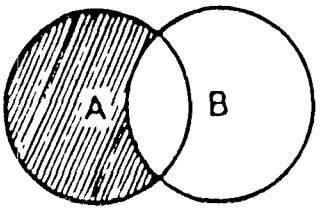

FIGURE 10.

(iv) **Mixed Approaches :-** Now let us mentions some approaches that lie between heading sand full keyword searching on the specturn on search methods.

Adjacency, this searching, is an extension of phrase searching. In this searching, the searcher specifies that two or more words must be present in the record, in the order indicated, but necessarily next to one another; as long as they are within two or three of each other, or some other

value specified by the user, the record will be retrieved. At present no production catalogue usesthis method.

User-Delimited Phrases, If there are problem of false drops, one way to help is to let the user establish the context in which the keyword is used. One way to perform this is to permit "phrase searching", in which the searcher can enter s string of words that must be matched, word for word, in the order specified - a capability provided by the on-line catalogue at Dartmouth. Phrase searching is more precise than keyword searching, but more flexible than heading serching, because the user's phrase need not be at the beginning of the heading. And also, phrase searching can be designed so that the problems of entering exact spacing and punctuation, which may afflict heading-search systems are avoided.

HOW TO DISPLAY RESULTS

Now that the computer has completed it's search, it is time to show the searcher what he/she has found : to display the search results. For author/title searching, this is a straight forward matter. In subject searching, the searcher faces a more difficult task : determining which, of the citations retrieved is relevant. The lists of matching subject headings and lists of class numbers in the selflist order have been used to facilitate selection.

(i) **Headings Lists :-** The user find relevant information is to display the subject headings that match the search request, before displaying the records that are indexed under those headings. The following figure shows the subject headings matching the search term "communications" in the MELVYL system. Firstly, we can see that, there are numerous subject headings containing this term : more than one thousand in the catalogue at present. Secondly, the term does not appear as the first word in these headings in a significant number of ways cases. Lastly, the term is used in a number of ways, only some of which may be of interest to the user.

Airports - Communication systems.

Communication

Communication in agriculture

Communication in housing policy

Communication in management

Communication in medicine

Communication in politics

Microwave Communication systems

Mine Communication systems

Optical Communications

FIGURE 11: A Headings Display for "Communications"

(ii) **Classification Lists:-** The other two techniques can be considered related to headings display as a user aid. One is a shelflist search, in which searcher can enter the can numbers for a relevant item and see a sequential display of items with call numbers appearing on either side of the number entered. This capability is introduced by the "shelf-position search" in the Ohio State University LCS system. The self-position seafch has a problem, that it requires the user first to know atleast one relevant call number or part of a call number, and second, to enter it correctly in order to generate at least one "hit". If more complex, approach is to display information derived from the heirarchical structure of the classification system itself.

(iii) **Bibliographic Records and their Parts:-** It is not factor, whether or not headings are displayed first, eventually we get around to the display of the bibliographic records themselves. The displays will follow good general principles of video display design and that various levels of display options, showing orderly large amounts of information about each record, are available to the user. It is essential to remember that subject searches should display subject information. When retrieval sets are large, the user is not helped to narrow or redirect the search when confronted by different screens of on-line records containing only authors and truncated titles. When possible, subject searches should display subject data : complete titles, subject headings and notes, for example.

(iv) **Order of Presentation of Records:-** The order of presentation in which the records are displayed. Conventional alphabetical sorting orders may have no value for the user scanning large results for relevant items, particularly when the sort is based on the main entry, an element that usually has no subject content at all.

One alternative is to display results in order by date, with the most recent publications listed first. The Ohio State system is one that follows this practice. This technique has the virtue of presenting the most recent publications on a topic first.

Another helpful order of displaying is by classification number. This technique is used the Ohio State shelf-position search, but does not require the user to enter a call number; rather it orders by call number the records retrieved by subject term. We can imagine the display so sorted might be confusing to users, and also difficult task to manage the number of record was very large and distributed between different classification areas/fields.

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ON-LINE CATALOGUE INDEXING

The on-line catalogue has fundamentally an indexing application. The various on-line public access catalogues (OPACs) developed over the last few years exhibit different concepts to providing ready and effective on-lone access to library holdings.

The first automation project wass the machine-readable cataloguing (MARC) started by the LC in 1966. The MARC format of LC is a communication, and recognition of bibliographic data. The original machine receiplient of this communication was a catalog card printer, the target is now the online bibliographic database of local library holdings to which the OPAC provides access.

The on-line record of libraries' participation created in OCLC, RLN, and the large, shared circulation systems permitted an extension of the use of the database, the on-line union catalogue of holdings. Now the question for OPAC development is not how the format would be improved but how best to use it. To its use an indexing is the key.

An indexing cannot be considered in isolation. The utility of any indexing technique depends both on the way the index manipulates the data and how the index will be search ?

BIBLIOGRAPHIC DATA

The headings data in the MARC of LC record, aside from control codes of different kinds, can be analysed according to their content and arrangement. Some data are essentially arbitary numeric codes; others are textual. Some are composed of "free" elements taken from the material described others are assigned from controlled vocabularies. Some are arranged in more-or-less logical hierarchies, others follow natural language grammar. Any heading will full into one category or the other along each of these three dimensions.

The facility of Library of Congress's MARC bibliographic data is manipulated can be summed up in whether the indexing process recognizes the various demarcations and codes within the data-fields, subfields, indicators-and how the codes are processed. Not all logically potential categories of access points have members (hierarchical free text is hard to is imagine), nor are all Library of Congress MARC access points relevant to the OPAC.

For topical indexing purposes, format, imprint, date, edition or issue and language data and likewise can be topically significant. In the case of two types of bibliographic data elements, a new possibility is created by the use of the MARC record of LC as input to an OPAC. The

OPAC can provide a Dewey classed catalogue of a collection shelved in LC class order by building an 082 index. It can provide a MeSH (650-2) index to an LSCH collection. MORE sophisticated approaches involve segregating the indexes, with perhaps the ability to transfer among them at cross-reference points, and in the case of alpha-numeric indexes such as classifications, providing an indexed textual description of the subject.

STRUCTURES OF INDEX

There are two basic types of indexes to bibliographic records, and a third that combines elements of both, heading, keyword and permuted. There are vary in the ways in which they combine the number of entries (access points) generated with the extent to which the entry preserves the contex from which it was extracted. The keyword index treats each identifiable component of the bibliographic data element as a single unit, filing an index term for each component identified, usually word-by word as identified by blank spaces. The permuted index, like the keyword index, files an entry for each identifiable "word" but like the heading index, preserves and displays the context in which the word has been found. The keyword indexes are also called KWOCs (keyword Out of Context), permuted indexes are also called KWICs.

Structures of Index Taxonomy

Structure	Accesspoints	Context
Heading	Few	Present
Permuted	Many	Present
Keyword	Many	Absent

FIGURE 12 .

TECHNIQUES OF SEARCH

The On-line searching can use two techniques : browsing and selection and any particular search may combine both in some sequence.

Browsing gives the searcher to review an alphabetically or logically ordered portion of an index. Selection gives the searcher to review a set of citations. Browsing is "error tolerant", that is, rigid keystroke and accuracy are less crucial to the search's success, while the success or failure of a selection search depends on both mechanical and conceptual accuracy. Browsing takes more time but requires

less forethought. Generally, browsing produces fuller retrievals are more narrowly relevant. On the other hand, selection can use some sophisticated methods to refine the retrieval, such as Boolean combinations of characteristics.

Taxonomy of Search Techniques

Feature	Technique	
	Browsing	Selection
Error tolerance	High	Low
Sophistication	Low	High
Retrieval relevance	Low	High
Comprehensiveness	High	Low

FIGURE 13.

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THE ROLE OF ON-LINE CATALOGUE IN NETWORKS

A network is a large number of people, institutions, things like computers etc, that have interrelationship or connections and work together as a system for a common cause. Applying the network concept in the retrieval of information to provide better and efficient information through resource sharing is one of the cherished goals in the field of library and information science. There are two possibilities viz-interlibrary loan, involving the mutual lending and borrowing of documents among libraries and its offshoot activity, is the creation of union catalogs through co-operative efforts. The other one is resource sharing through network which means a number of libraries to agree to co-operate for mutual benefit, arrive at common objectives, plan and implement the network by consolidating their resources e.g. men, money, machines, methods and management skills - through the use of new information technologies.

The use of cataloguing networks has promoted shared and cooperative cataloguing . Libraries are now able to get 80 percent or more of their cataloguing from a network such as WLN, OCLC or RLIN and they contribute the other 20 percent

or so for other libraries to use as needed. The most obvious "pro" of this situation is that each library does not have to catalog originally every book it acquires : instead, each library catalogs some of its holdings, contributes these cataloguing records to a network database, and then all libraries participating in the network use which ever cataloging records they need. This is a basic, simplified, and somewhat idealistic statement of the concept of shared cataloguing. The resultant "con" hs proven to be that not all contributed cataloguing is of equal quality, which means that many libraries participating in a network cannnot, or will not accept shared cataloging records without extensive revision and editing, because the national cataloguing standards are not universally applied.

In order for the idea of share cataloguing to work as efficiently as possible, contributing libraries must recognize that, while at times they may have to catalog at a higher standard than they believe meets their needs, the benefits of driving the majority of cataloguing form the networks outweigh this drawback, and, the networks in turn must mandate cataloguing standards and enforce quality control for all contributed cataloguing. For example WLN requires its contributing members to follow national cataloguing standards (AACR-2 revised, LCRI and so on), and

it enforces these standards with its staff of reviewers, who check contributed cataloguing records and return them to the originating library, with explanations, if they do not meet national and network standards.

The same concepts that guide shared cataloguing in a network environment national standards and quality control can also be applied to shared maintenance of local online catalogs. If all libraries share mainteance of cataloguing and authority records, at the network level, the amount of work each library has to do at the local level to maintain its own online catalog will be reduced. As with shared cataloguing, it is necessary for the contributing libraries to the able to trust the quality and integrity of the network database for shared maintenance to work. Just as most libraries derive the bulk of their cataloguing records from LC, so too can much of local catalog maintenance be done through LC, either by having LC update tapes loaded directly into local catalogs, or by receiving all updates, including LC updates, from cataloguing utilities.

In India, the need of resource sharing and creating local and unifed bibliographic database has been well recognised, but till recently the options for using information technology for developing computerised

databases at local, regional and national level were not available. Some select examples of national level databases, produced manually and delivered in hard copy, are : Indian National Bibliography brought out by the Central Reference Library Calcutta; Indian Science Abstract and National Union Catalogue of Scientific Serials, bought by the INSDOC (Indian National Scientific Documentation Centre); Union Catalogue of Social Science Periodicals brought out by National Social Sciences Centre (NASSDOC).

DELNET, CALIBNET, BOMNET are envisaged as Metropolitan Area Network (M A N). These network has been designed to support remote log on and access of databases along with provision for document exchange, electronic mail and file transfer facilities.

The University Grant Commission, India has also prepred a frame work for the development of an information and library network called Information and Library Network (INFLIBNET) in the Eighth Five Year Plan period (1990-95). INFLIBNET is grand plan to interconnect about 150 university libraries, 50 postgraduate centres, autonomous colleges, and about

200 of R & D institutions outside the university system including libraries of Council of Scientific & Industrial Research (CSIR), Defence Research & Development Organization (DRDO). Indian Council of Medical Research (ICMR) and Indian Council of Social Science Research (ICSR).

CONCLUSION

Hence, it may be concluded that the Network through On-line is a logical technology for libraries and information centres to adopt, and cites lower cost and greater flexibiltiy as advantages over other systems. There is no doubt that interest in and use of Network through On-line by libraries is growing and will continue to grow.

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LIBRARY CLASSIFICATION IN AN ON-LINE CATALOGUE

INTRODUCTION

Library classification may be a user's tool for subject access, browsing and display in an on-line catalogue. There are four features of a library classification that can help on-line searchers match their subject terminology with the on-line catalog terminology and browse for better terms to express their topics are :-

(i) The subject terminology in classification schedule.

(ii) The arrays of terminology enumerated in the schedules, whose relationships to each other are evident from indentions in printed schedules or the notation of class numbers.

(iii) The subject terminology in the index to the schedules.

(iv) The class numbers listed in the schedules and index.

Through these subject terminologeis, users can have much more subject information to match their search-terms and to search for better terms to express their topics in on-line catalogue.

There are a number of on-line catalogues presently feature class number searching. Although the actual search

programs for class number searching differ from system to system, most on-line catalogues search the inverted file of class numbers in the bibliographic database and retrieve all the books with actual userentered class number. We may, however examine the application of two schemes of classification, viz. Dewey Decimal Classification and Library of Congress Classification.

DEWEY DECIMAL CLASSIFICATION IN AN ON-LINE CATALOGUE

DDC on-line project (1985), conducted by the Forest Press and OCLC under the sponsorship of the Council on Library Resources (CLR).

The aims of the DDC on-line project are as follows:-

(i) Use the consensus of DDC experts to determine strategies for searching and displaying DDC in an on-line catalogue.

(ii) Clearly DDC is an online searcher's tool for subject access, browsing and displaying in an online catalogue.

(iii) Test the usefulness of DDC as an on-line searcher's tool.

(iv) Evaluate the test results of DDC as an on-line searcher's tool and disseminate the results of the project.

The demonstration of DDC an online searcher's tool will implement the above features of a library classification that can help the searchers inmatching their terminology with the catalogue terminology and browsing for better search terms to express topics. These four features are as follows ;-

(i) The subject terminology in DDC schedules.

(ii) The subject terminology in the DDC reltive index.

(iii) The hierarchical arrays of related terminology in DDC schedules.

(iv) The class numbers in DDC schedules.

(a) Subject access in the DDC :- There are two sources of subject-rich information in DDC that are not mentioned in libraries' bibliographic records, viz.

(i) The headings in DDC schedule

(ii) The entries in the DDC relative index.

The links between bibliographic records and headings from the DDC schedules and relative index entries are DDC class numbers. A machine-readable cataloguing record, whose class number matches or al-most matches a class number in the machine-readable DDC schedules and relative index, will be augmented with headings from the schedules and entries from the relative index.

(b) Browsing and the DDC :- DDC will help a user to browse the on-line catalog using the conventional alphabetical concept of displays of indexed, preco-ordinated subjects in response to the searcher's entered terms. The searcher's entered terms are matched with indexed relative index entries and the technique produces an alphabetical list of DDC relative index entries. From, the list, selection will direct the user to bibliographic records. The searcher may select to browse forward and backward to idea terms in alphabetical list.

(c) The display of DDC :- Actually, the display of DDC in an on-line catalogue displays of bibliographic records enhanced with headings from DDC schedules and entries from the reltive index. The additional subject information from DDC in intermediate and bibliographic record displays will increase the total amount of subject information about retri eved items and will enable subject searchers to make necessary assessment. The search and enhanced of bibliographic record displays in a screen as following figure:-

---

CALL NO.	:	796.3 C83H
TITLE	:	An historical Analysis of Competitive Rubber Ball Games in Mesoamerica
DEWEY SUBJECT	:	Athletic and Outdoor sports and gaems-Ball games

DEWEY INDEX	:	Ball-Games-Outdoor and general-Sports
LC SUBJECT	:	Ball Games-Central America
LC SUBJECT	:	Ball Games-Arizona
AUTHOR	:	Cox, Allan Elton
PUBLIATION	:	Edmonton, Alba. : University of Alberta, 1967

FIGURE 14 : Displays search and enhanced of bibliographic record.

LIBRARY OF CONGRESS CLASSIFICATION IN AN ON-LINE CATALOGUE

After successful application of DDC in an on-line catalogue, the Library of Congress, in the year 1987, has taken the first steps towards the automation of its own classification system. In November 1987, LC had established a set of long-range objectives, and outlines a tentative plan for action. Subsequently, at the ALA mid winter meeting in January 1988, the project for the computerization of the Library of Congress Classification (LCC) was formally anounced.

The project has four clearly well-defined objectives which are as follows :-

(a) an On-line interactive editorial support system to enable the LC to edit, update and maintain its classification schedules on-line;

(b) a system which will permit classifiers at LC, and in other libraries to classify, and shelf-list on-line;

(c) the production of the LCC shedules in a variety of physical forms : paper-volumes, computer tape, CD-ROM etc; and

(d) a catalogue users' search tool which would enhance subject retrieval from on-line catalogues.

As the project is in progress, it is premature to describe clearly what the last result will be. Nevertheless the work to-date provides evidence of certain trends and possibilities.

The analysis of the Library of Congress schedules, done the project, is already having an influence on the LC staff. There is an increasing awareness of inconsistencies and possibilities for improvement. The result of data analysis will be seen in the new editions of the printed schedules.

As soon as the data analysis has been completed, and the report prepared, LC will be in a position to finalise the MARC format. If a satisfactory MARC record format can be developed for the LCC, it is assume that the same technique can be done for other classification systems. As an extension of LC project, the "working format"

has been applied, with success, to a sample of entries from the 19th edition of DDC, the UDC International Medium Edition (English text) and the Bliss Bibliographic Classification.

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ON-LINE LIBRARY CATALOGUES AND E-MAIL

In office automation, as elsewhere, individual functions can often be more useful if they can be used in conjunction. Two computer-based functions with different origins are electronic mail and online retrieval systems. The linking of these two can extend the benefits of each.As an example, the combining of electronic mail with a sophisticated example of online retrieval, the online library catalog in order to improve library service is explored.

Electronic mail is the "sending" of notes by storing and reading short files in computer memories accessible by two or more people. Strictly speaking, notes are not sent "to" individuals but rather written in "mailboxes" that the recipient can read . Since, electronic mail is primarily a local activity, the exchange of mail with a distant correspondent requires special arrangements of which there are three forms.

(i) Each pair of users could decide that correspondence would be achieved by agreeing that one would use the local system of the other from a distance. This tends to be incovenient because it requires individuals to learn the details on and check, a

multiplicity different systems, often with different command languages.

(ii) Both could agree to use a common regional or national electronic mail service (such as The Source, ALANET, CLASS Ontyme,, etc.). This means checking a minimum of two mail boxes : one local, the other broader. In practice it tends to mean more, since there are numerous regional and national electronic mail services.

(iii) "Gateways" between electronic mail systems can be used so that a note from A to B would be transferred from the system of A through a gateway into the system used by B, where it can be stroed in the mailbox of the electronic mail system that is local for B. This practice can be extended to have the note travel through multiple intervening networks and gateways to reach the destination mailbox, much as with international postal services. This requires standardization of internetworking protocols. A number of internetworking systems exists, notably EITnet and ARPANET.

Online library catalogs can be accessed in more than one way :

(i) through dedicated terminals usually located in libraries;

(ii) by telecommunications, as in the case of "dial-in" access from workstations that are not dedicated but that can be connected directly to the catalog by telephone or other local area network;

(iii) by computer network as a "virtual terminal". In this case the workstation is connected to a remote network, which is connected by means of a "gateway" to the network of the online catalog with sufficient interoperability to allow the user to function more or less as though connected directly to the catalog-as a "virtual terminal";

(iv) and, in the future, as a database server.

These two systems- electronic mail and online library catalogs-have been developed separately for quite different purposes, by different groups, and in different contexts. One is viewed as "office automation", the other as "library automation".

THE STRUCTURE OF ELECTRONIC MAIL

It is useful to distinguish five aspects of electronic mail : sending modes, populations, functionality, connectivity and privileges.

Sending Modes:- Electronic mail can be structured within a user population so that there is a single sender or many senders, a single recipient or many recipients. Logically this resutls in four modes :

* Mode A : One-to-one mail ("Notes"), whereby one user can send a note exclusively to any one other user;
* Mode B : One-to-many mail ("Broadcast"), whereby one user can send notes to all other users;
* Mode C : Many-to-one mail ("Comment"), whereby many user can send notes to just one individual, usually a system administrator ; and
* Mode D: Many-to-many mail ("Bulletin board"), whereby many users can send notes that are readable by many other users. Computer conferencing can be considered a sophisticated form of "bulletin board" mode electronic mail.

Populations :- There can be subpopulations with different characteristics. In the context of library service, library staff are ordinarily distinguished from readers and accorded different privileges. Consider, for example, the first mode : "One-to-one". Dividing the population into two populations results in four submodes :

* librarian to librarian;
* librarian to reader;
* reader to librarian; and
* reader to reader.

These four submodes exhaust the possible combinations within Mode A: One-to-one mail. In this case two subpopulations resulted in four submodes. More generally, n subpupulations results in n^2 submodes of each mode. Similar sets of submodes are possible for each mode when subpopulations are present.

Functionality :- Electronic mail note has at least three elements : identification of adressee, text of the note itself and identification of the sender. In practice it would be difficult to operate without also having the time the note was sent. The note itself is commonly a simple text, although multimedia notes featuring images and sound will doubtless become availble. Numerous addtional refinements can be added to electronic mail systems to make it easier to perform particular tasks with notes, such as replying, copying, forwarding and discarding them, or veryfying that they have been received.

Connectivity :- Each electronic mail system runs on a particular computer and serves those who have access to it.

In the absence of connections between systems, one can correspond only with those who share the same system. Beyond one's local system, it is necessary to have a mailbox for each of several systems : each additional mailbox permits the exchange of mail with an addtional population.The obvious inconvenience of this multiplicity of mailboxes to be checked for mail is exacerbated by the vriations in design and command languages of the different mail systems. The inconvenience can be reduced by recourse to a combination of local system and national system. However, much greater convenience can be achieved by linking local systems together much as local telephone switchboards are linked to each other.

Privilege :- Mail can be designed to provide gradations of sending privileges (to no one, to one, to several designated addresses, to everyone); receiving privileges (only authorized individuals have mail boxes); and combinations of the two. For example, a library service can be expected to provide librarian -to-librarian mail, might provide librarian-to-reader mail and/ or reader-to-librarian mail, and could refuse to support reader-to-reader mail.

Privilege can also be varied with respect to individual functions. Perhaps only librarians, faculty and graduate students could be allowed to use the interlibrary

loan function by electronic mail, and even then, interlibrary loan mail could be sent only to the library's interlibrary loan mail box. Possibly only the interlibrary loan, librarian would be authorized to send interlibrary loan mail to other libraries.

The above different modes, subpopulations, functions, connections and privilege of electronic mail in conjunction with online library catalogs will be as follows:-

Mode A: One to One

The two principal subpopulations (librarian and reader) result in four principal submodes :

A.1 **Librarian to Librian :-** The routine exchange of notes between librarians (more generlly, library employee) is likely to be the first librry use of electronic mail, either as a subset of a wider, institional electronic mail service or as a library-based service. There is obvious convenience if electronic mail can be exchanged using the same hardward and intermingled with use of that hardware for other library activities such as searching an online catalog, retrieving images (digitized photos, maps, etc.) or downloading text.

Requests for documents can be exemplified by the interlibrary loan service provided on the OCLC system, where the bibliographical data and holding library are already identified. In any multilibrary system where the online catalog serves as a union catalog, an interlibrry loan request function that could forward a copy of a record would be useful. Similarly, a suitable format for entering, then forwarding, interlibrary loan requests would also be useful.

A.2 **Librarian to Reader :-** Librarian-to-reader mail would appear to be typically a matter of notification : that a book has been acquired; that a borrowed book is due back; that a book recalled or borrowed through interlibrary loan is available; or that these books are not yet or will not be available. Some of these could be generated automatically.

The selective dissemination of lists of materials new to the online catalog is a striking example of electronic mail in conjunction with online library catalogs.

A online systems and telecommunications permit remote uses of library services, one can expect

incresed uses of electronic mail as a means by which librarians would answer readers' questions and provide help of one sort or another.

A.3 **Reader to Librarian :-** Enabling readers who are electronic mail users to send notes to librry employees, typically through a wider, institutional electronic mail service, makes the library employees more accessible, especially to readers based at a distance from the library. It is a convenient way for library users to forward requests for help to librarians.

As for librarians, providing readers with a template for entering bibliographical records or enabling them to forward existing catalog records should provide a basis for suggesting acquisitions, reporting errors, or asking for interlibrary loans that would be more convenient, less error prone and faster than using the traditional forms.

Requests for the renewal of loans is an example of reader-to-librarian mail.

A.4 **Reader to Reader :-** Librries with online catalogs are uniquely placed to facilitate electronic mail

because of the widespread availability of dedicated terminals. Not all readers have access to electronic mail. Even those who do are at a distance from their own workstation when in a library. Even in universities, not all faculty and certainly not all students have workstations. Enabling dedicated catalog terminals to support the sending of electronic mail should not be very difficult technically. The dedicated terminals could also be used receive electronic mail to the extent that libraries are willing to assign (or to allow the self assignment of) mailboxes to those who are otherwise disenfranchised. One practical consideration is that the additional amenity might prove to successful (or at least so popular) as to increase the number of terminals and computing support needed.

Mode B : One to Many (Broadcast Mode)

The online library catalog provides an excellent opportunity for electronic messages in "broadcast" mode in the form of messages on the "salutation" screen and messsages that can be flashed to all current users. Librarians can broadcase through existing electronic mail

systems, but the combination of online catalogs and electronic mail seems less likely to be used, except for the broadcast distribution of accessions information as a general-interest version of the selective dissemination of information.

Mode C : Many to One (Comments Mode)

The many-to-one mode can be seen where a "comments" function is provided, allowing catalog users to make suggestions and complaints. Such feedback can be of connsiderable value to those responsible for catalog provision. The comments are, in effect, electronic mail with only one permitted destination. Since no reply is expected the senders do not need mailboxes or even to identify themselves.

Mode D : Many to Many (Bulletin Board Mode)

The provision of a general purpose or a library-oriented bulletin board service accessible through catlog dedicated terminals would be an example. Another is where comments received through a comments function are answered and displayed for all to see as an educational feature of the catalog. In a library context, one would envisage enabling readers to post comments on particular books and linking those comments to the catalog records for those books.

CONCLUSION

Hence it may be concluded that electronic mail has been developed to perform office automation function. Online library catalogs developed through library automation used in specialized libraries, on-line catalog function quite successfully.

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PART - TWO

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-, LIBRARY OF CONGRESS SUBJECT HEADING.

66. MARKEY (Karen) and VIZINE-GOETZ (Diane). Untraced references in the machine-readable Library of Congress subject headings. Lib Reso Tech Serv. 33, 1; 1989, Jan; 37-53.

Describes general explanatory, see also references (MARC tag-360), and scope notes (MARC tag-680) are fields in LCSH-mr records tht contain references to headings in bibliographic records to on-line catalog searchers.

-, LIBRARY USERS.

67. FREEDMAN (M J). Must we limit the catalog ? Lib J. 109, 3; 1984, Feb; 322-4.

Librarians must welcome the improvements of on-line catalogues they should not sacrifice the traditional features of catalogue. On-line catalogues have potential for improving subject aid to library users.

-, LINKING DEVICES.

68. VELLUCCI (S L). Uniform titles as linking devices. Cata Class Q. 12, 1; 1990; 35-59.

Narrates Uniform titles have great role for multi-dimensional on-line catalog systems of the future. Needs bibliographic relationships, research of authority control and development of on-line catalog file structure. Uniform titles is linking devices and foundation point for information in the on-line catalog system.

-, MANAGEMENT.

69. CARPENTER (Michael). Narrow, rugged, uninteresting path finally becomes interesting : A review of work in descriptive cataloging in 1991 with trail marks for future research. Lib Reso Tech Serv. 36, 3; 1992, Jul; 291-315.

Describes practical procedures related to descriptive cataloging, displays in on-line catalogs and management of cataloguers.

70. HAWKS (C P). Management information gleaned from automated library systems. Inf Tech Lib. 7, 2; 1988, Jun; 131-8.

Explains management information generated by automated library systems in collection development and the on-line catalog. Advantages of learning about library users, transaction logs can be used to improve the design of the on-line catalogue.

-, MANUSCRIPTS.

71. BLAND (R N) and LIOYD (J B). Online manuscript search service. Inf Tech Lib. 2, 3; 1983, Sept; 295-6.

Describes bibliographic data about the manuscripts in standard format, exchanged and integrated through

on-line catalogs system. Considers subject access and bibliographic control to create a unified on-line system for the manuscripts.

-, MARC RECORD.

72. COLGLAZIER(Merle Lee). Book Catalog produced from USMARC records using Bibliofile, Pro-cite, Biblio-link and Word perfect. Inf Tech Lib. 7, 4; 1988, Dec; 417-29.
Describes advantages of a book catalog may even out weigh those for an on-line catalog in some particular situations.

73. GORMAN (Michael). Yesterday's here say-Today's orthodoxy: An essay on the changing face of descriptive cataloging. Coll Res Lib. 50, 6; 1989, Nov; 626-34.
Analyzes descriptive cataloguing through on-line catalogue. Provides interlibrary loan services, CD-ROM catalogues and other high tech wonders in MARC tapes for on-line catalogues.

-, MUSIC NOTATION.

74. BURBANK (R D) and HENIGMAN (B). Music symbols and Online Catalogs : A survey of vendors and an assessment ofretrieval capabilities. Inf Tech Lib. 11, 3; 1992, Sept; 203-9.

Traces two symbols, sharp and flat in music notation occur in the uniform title portions of both bibliographic and authority records. There two symbols introduce special problems for the retrieval of music materials in on-line catalogs system.

-, NATIONAL MEDICAL LIBRARIES, USA.

75. DOSZKOCS (Tames E). CITE NLM. natural language searching in an On-line Catalog. Inf Tech Lib. 2, 4; 1983, Dec; 364-80.

Describes public access on-line catalogue offers unique search capabilities such as natural language query input, automatic medical subject headings display and the use of dynamic end user feed back for search refinement of the National Library of Medicine's CITE.

-, NATIONAL PROGRAM.

76. AVRAM (H D) and WIGGINS (B). National co-ordinated Cataloging program. Lib Reso Tech Serv. 32, 2; 1988, Apr; 111-5.

Discusses formal system of the National co-ordinated cataloguing program through on-line system. Library of Congress database distributed on linked system project, to OCLC.

-, NETWORK.

77. MIFFLIN (Ingrid) and WILLIAMS (Jean). Online catalog maintenance : The role of networks, computers, and local institutions. Inf Tech Lib. 10, 4; 1991, Dec; 263-73.
Mentions the importance of maintaining the accuracy and currency of the information through on-line catalog. Describes ideas of on-line catalog maintenance that can be accomplished through cataloguing networks, or automatically by computer program.

78. LUTZ (Marilyn) and others. Using the community information format to creat a public service resource network. Inf Tech Lib. 11, 4; 1992, Dec; 373-83.
On-line catalogue contains the profiles of participating faculty relative to their professional expertise willinglness to engage previous consulting experience, as well as records of organizational units, services programs and facilities.

79. HAFTER (Ruth). Born-again Cataloging in the Online networks. Coll Res Lib. 47, 4; 1986, Jul; 360-4.
Mentions work of individual libraries and their cataloging systems in an on-line network. Network affiliated libraries and network quality control personnel, become participants in evaluting each cataloger's work.

-,-, OHIO

80. HAWKS(C P). Integrated library System of the 1990s : The Ohiolink experience. Lib Reso Tech Serv. 36, 1; 1992, Jan; 61-77.

Deals specifically Ohio Library and Information Network (Ohio Link) Libraries as necessary for patrons use through on-line public access catalog. Suggests subject access tools through good online catalog design.

-,-, SMALL ACADEMIC LIBRARY.

81. DAGOLD(M S). Last frontier: Possibilities for networking in the small academic library. Lib Reso Tech Serv. 27, 2; 1983, Apr/Jun; 132-41.

Mentions the advantages, disadvantages and especially the cost factor to the small library system of participation in an on-line cataloguing network. Provides a cost-benefit analysis for the administrators of a small college in Maryland.

-,-, UNIVERSITY LIBRARIES, BRAZIL.

82. FREDERICK (Janet). Birth of a network : The Brazilian struggle. Coll Res Lib. 50, 1; 1989, Jan; 76-82.

Describes a centre for co-operative cataloguing for University libraries in Brazil. Mentions development of on-line network for catalogues system.

-, NON-ROMAN MATERIALS.

83. MILLER (R B). Nonroman scripts and computer terminal developments. Inf Tech Lib. 1, 2; 1982, Jun; 143-8.
Mentions the problem in card catalogues due to the application of different romanisation standards for non-roman scripts may be improved by the change to on-line catalogues system. Provides access in the original script for non-roman materials is made less difficult in an online environment.

-, OOPS COMMANDS.

84. STRIEDIECK(S). On-line Catalog maintenance : The OOPS commands in LIAS. Cata Class Q. 6, 1; 1985; 21-32.
Describes integrated interactive on-line system at the Pennsylvania state university provides information in bibliographic records. The OOPS commands in LIAS for catalog maintenance in an on-line catalog is mentioned.

-, OPERATION AND SYSTEM.

85. HUDSON(Judith). Cataloging for the local Online system. Inf Tech Lib. 5, 1; 1986, Mar; 5-27.
Describes briefly the automated system in the cataloguing operation and process in the on-line system. Concludes with some suggestions for cataloging departments planning for an online system.

-, PATRONTS, LIBRARIES, NORTH-AMERICA.

86. BOSS (Richard W). Linked systems and the Online Catalog. Lib Reso Tech Serv. 34, 2; 1990, Apr; 217-28.
Discusses online patron access catalog and library's holdings from several terminals using either a menudrivon or command made in libraries throughout North America.

-,-, UNIVERSITY LIBRARY, OHIO.

87. GOUKE (Mary Noel) and PEASE(Sue). Title searches in an Online Catalog and a card Catalog : A comparative study of patron success in two libraries. J Aca Libr. 8, 3; 1982, Jul; 137-43.
Compares patron success in findings the same group of titles in both the on-line catalogue and card catalogue in the university library of Ohio. Mentions problems, nature and length of the experience of online catalogue.

-, PERFORMANCE.

88. BARREAU (Deborah K). Using performance measure to implement on On-line Catalog. Lib Reso Tech Serv. 32, 4; 1988, Oct; 312-22.
Analyzes technique used in implementing and evaluating

an on-line catalog in the library of a small university and affect the ability of libraries to make materials available to patrons.

-, PITTSBURGH UNIVERSITY LIBRARY.

89. LEIBOWITZ(F) and SORENSEN (C). Perspectives on the Pennsylvania newspaper project at the University of Pittsburgh. Cata Class Q. 6, 4; 1986, Sum; 39-57.
Describes bibliographic stage interms of organisation and procedure in an on-line catalog at the University of Pittsburgh. Implements online project direction for newspaper in to the online computer.

-, PLANNING

90. HEERY (Michael). Polytechnic libraries and academic research : A case study from Brighton Polytechnic. Aslib Proc. 39, 4; 1987, Apr; 123-33.
Analyzes on-line search in cataloguing of Brighton polytechnic library to provide a useful service to academic researchers.

-, PLANNING AND CONTROL.

91. TAYLOR(Raymond G). Measure of expected On-line Catalog performance for public access terminals. Inf Tech Lib. 7, 1; 1988,Mar; 24-9.
Discusses online catalogue system's performance for

public access terminals with technical considerations of planning and control. Represents a major change in the way most patrons are accustomed to accessing library material by on-line cataloue.

-, PLANNING AND DEVELOPMENT, RESEARCH LIBRARIES.

92. RICHARDS (T F). Online Catalog : Issues in planning and development. J Aca Libr. 10, 1; 1984, Mar; 4-9.
Mentions key issues in planning and development for an on-line public access catalogue in the content of an academic research library environment.

-, PLANNING, COLLEGE LIBRARY, DARTMOUTH.

93. KLEMPERER(Katharina). New dimensions for the On-line Catalog : The Dartmouth College library experience. Inf Tech Lib. 8, 2; 1989, Jun; 138-45.
Introduced online catalogue at Dartmouth College in 1979. Completed a piolet to demonstrate the feasibility of the DC IS approach and includes monographs, serials, encyclopedia, a subject of the NLM MEDLINE file.

-, PRINCIPLE AND SYSTEM.

94. SHOHAM(S) and LAZINGER (S S). No-Main-Entry principle and the automated Catalog. Cata Class Q. 12, 3/4; 1991, 51-67.

Analyzes No-Main-Entry principle and the accompanying description system of cataloging in relation to on-line catalog system. Main-Entry concept from the time of the single entry catalog of the on-line catalog is discusses.

-, PROCEDURE, ACADEMIC LIBRARIES.

95. SIEVERT (M E) and others. Investing computer anxity in an academic library. Inf Tech Lib. 7, 3; 1988, Sept; 243-52.

Analyzes need to train and retrain staff members to learn detailed procedures for a distinct subsystem of on-line catalogue. A program on computer technology at the University of Missouri-Columbia libraries provides the opportunity to study computer anexity.

-, PUBLIC LIBRARIES.

96. SLOAN (Bernard G). High tech/Low profile : Automation & the 'invisible' patron. Lib J. 11, 18; 1986, Nov; 4-6.

Discusses on-line public access library system is an increasing important topic in recent years. Public access began in 1978 at Illinois University at Urbana. A wide no. of references are made to those considering this type of library system.

-,-, U.K.

97. CLARKE (J E). Here's Online public access. Pub Lib J. 1, 1; 1986, Mar/Apr; 1-4.
Gives information through on-line public access enquiry terminals in UK public libraries. Provides public enquiry local information, personal details and future direction etc.

98. CLARKE (J E). Human/IT interface librarian's viewpoint. Lib Inf Res N. 8, 30; 1985; 5-9.
Describes a library system with an on-line public access catalogues (OPACs) into at Hillington public libraries in 1983. Every library staff and general public use on-line catalogue system.

-,-, U.S.

99. SALMON (Stephen R). Characteristics of On-line Public Catalogs. Lib Reso Tech Serv. 27, 1; 1983, Jan/Mar; 36-67.
Discusses the functional characteristics of 20 on-line public catalogs in the libraries of US. Mentions data base and, technical characteristics, bibliographic questions and costs factor.

-, PUBLIC SERVICES.

100. KALIN (S W). Invisible users of Online Catalogs : A public services perspective. Lib Tre. 35, 4; 1987, Spr; 587-95.

Designs and implements integrated online catalogs for invisible users. Mentions techniques, categories, searchin in online catalogs.

101. MAGRATH (Lynn L). Public and the Computer : Reactions to a second generation Online Catalog. Lib Tre. 37, 4; 1989, Spr; 532-7.

Contains information about the library's book, record, and video collections including checkout status and location of the item in on-line catalog for second generation.

-, RESEARCH.

102. SIMPSON (C W). Technical Services research. Lib Reso Tech Serv. 36, 4; 1992, Oct; 383-408.

Deals technical services including authority control, enhancement in on-line catalogs. Compares the importance and cost between card catalog and online catalogs.

103. HILL (Janet Swan). Year's work in descriptive Cataloging and ···. Lib Reso Tech Serv. 32, 3; 1988, Jul; 203-14.

Explains invasiveness of on-line catalogs and boundless growth of bibliographic co-operative endeavors for contined research and though.

104. YOUNG (James Bradford). Crisis in Cataloguing revisited : The year's work in subject analysis, 1990. Lib Reso Tech Serv. 35, 3; 1991, Jul; 265-82.

Analyzes modern cataloguing and classification practice and their adaptation to an on-line environment are bringing about a revolution in the practice of subject analysis. Conducts a research in 1990 on subject cataloguing and classification in online systems.

-,-, AMERICA.

105. SMITH (G D) and others. Automating bibliographic research : Identifying American fiction, 1901-1925. Call Res Lib. 48, 3; 1987, May; 252-60.

Discusses identified catalogue records in the OCLC database- the Online Union Catalog- for items to be within the projects scope. The American fiction project of the Ohio state University Libraries was the focus of research. Suggests methodology for compilation of bibliographies and development.

-, RESEARCH LIBRARIES.

106. CRAWFORD (Walt). Long searches, slow responses : Recent experience on RLIN. Inf Tech Lib. 2, 2; 1982, Jan; 176-82.

Describes the major on-line system for research librasries. Indexing , system responsiveness, long searches and alternative approaches are described.

-, RESOURCE SHARING.

107. HARJEE (Nimira). Interlibrary loan in an integrated environment. Sp Lib. 73, 1; 1982, Jan; 1-5.

Describes a modular approach to automation enables each library to choose and pay for required function in on-line catalogue for resource sharing and interlibrary loan.

-, RETRIEVAL SYSTEM.

108. LYNCH (C A). Response time measurement and performance analysis in Public Access information retrieval systems. Inf Tech Lib. 7, 2; 1988, Jun; 177-83.

Narrates both the measurement of response time and related performance data in large, interactive, public access information retrieval systems by on-line cataloge. University of California's MELVYL on-line union ctalog provides the majority examples in this paper.

-,-, DDC.

109. LIU(Songqiao) and SVENONIUS (Elaine). DORS : DDC Online retrieval system. Lib Reso Tech Serv. 5, 4; 1991, Oct; 359-75.

Implements the Dewey Online Retrieval System (DORS), as an interface to an online catalog for the purpose of experimenting with classification-based search strategies and seeking further understanding of the role of traditional classifications in automated information retrieval.

-,-, UNIVERSITY LIBRARY.

110. CORBIN (Roberta A). Development of the national research and education network. Inf Tech Lib. 10, 3; 1991, sept; 212-220.

Narrates development of the national research and education network at the University of California-SanDiego on on-line catalog with its enhanced keyword and Boolean access allows retrieval.

-,-,-, CHINA.

111. LIN (Sharon C). Library automation in China. Inf Tech Lib. 7, 3; 1988, Sept; 230-42.

Describes information retrieval system at Nanjing University with an on-line catalog of western language materials. Contains library and information services in the People's Republic of China are under the jurisdiction of two separate govt. agencies.

-, SEARCHING.

112. POPA (O D) and others. Teaching search techniques on the computerized Catalog and on the traditional card Catalog : A comperative study. Cell Res Lib. 49, 3; 1988, May; 263-74.

Explains on-line catalogue is an exellent bibliographic instruction tool and accomodate search concepts originally tough only for the card catalogue. On-line system is well linked, so students will prefer than the traditional card catalog.

113. WEISE (F O) and BORGENDALE (M). EARS : Electronic access to reference service. Bul Med Lib Ass. 74, 4; 1986, Oct; 300-304.

EARS (Electronic access to reference service) is an on-line public catalogue. Provides electronic mail, computerised literature search, reference information through online system.

114. GOLDEN (S U) and GOLDEN (G A). Access to periodicals: Search key versus keyword. Inf Tech Lib. 2, 1; 1983, Mar; 26-32.

Analyzes libraries replace their card catalogs with on-line systems and searching patrons in retrieving items. Compares the retrievability of periodical titles in a fixed length to keyword search.

115. HILDRETH (C R). To boolean or not to boolean. Inf Tech Lib. 2, 3; 1983, Sept; 235-37.

Describes approach of boolean searching in on-line public access catalogs for vocabulary phrase-match, subject searching and bibliographic data search.

116. McGARRY (D) and SVENONIUS (E). More on improved browsable displays for On-line subject access. Inf Tech Lib. 10, 3; 1991, Sept; 185-91.

Mentions main problems of subject serches in on-line public access catalogs are that too much may be retrieved and that the display may be arranged in unhelpful manner. A survey was undertaken on one large database to determine display of a subject and its modifications and subdivisions extended over more than two screens.

117. CHAN (L M). Library of Congress Classification as an Online retrieval tool : Potentials and limitations. Inf Tech Lib. 5, 3; 1986, Sept; 181-92.

Describes Subject Enhancement in Online Catalogs, sponsored by OCLC and the Council on Library Resources. LCC features in searching by on-line catalogs are discussed.

118. PULIS (Noelle V) and LUDY (Lorene E). Subject searching in an On-line Catalog with authority control. Coll Res Lib. 49, 6; 1988, Nov; 523-33.

Examines subject searching in a large research library's on-line public access catalog with a controlled vocabulary through on-line display of authority information from Library of Congress Subject Headings (LCSH) for terms used in catalog.

119. CONGRIEVE (Jaliet). Browsing through PRECIS : Structured subject access in an On-line Catalogue. Els Int Bul. 1986; 67-77.

Discusses use of automatically produced PRECIS indexes and PRECIS thesaurs for improving subject access in on-line public access catalogues (OPACs).

120. MANDEL (Caral A). Enriching the library Catalog record for subject access. Lib Reso Tech Serv. 29, 1; 1985, Jan/Mar; 5-15.

Analyzes proposals for librry bibliographic records for improved subject serching in on-line catalogs. Presents

arguments for and against adding book content indexing to the on-line catalog and the feasibility of eleven alternatives for providing information.

121. TAYLOR (Arlene G). Enhancing subject access in Online systems : The year's work in subject analysis, 1991. Lib Reso Tech Serv. 36, 3; 1992, Jul; 316-32.
Examines users and subject searching, subject access in on-line catalogs. The preponderance of the research deals with improving subject access in on-line systems.

122. LANCASTER (F W) and others. Identifying barriers to effective subject access in library Catalogs. Lib Reso Tech Serv. 35, 4; 1991, oct; 377-91.
Describes subject searches in an on-line catalogue containing about 4.5 million records. Their success was judged in terms of lists of items, known to be relevant to the various topics, compiled by subject specialist.

123. HANCOCK (Micheline). Subject searching behaviour at the library Catalogues and at the shelves : Implications for on-line interactive catalogues. J Doc. 43, 4; 1987, Dec; 303-21.
Narrates the impact of a future online catalog on users' searching behaviour. Online catalog provides access to a controlled language (LCSH or PRECIS) and

keywords in titles in a single environment. On-line cataloges has interactive approach to subject searching and promote a spirit of discovery.

124. ROUGHTON (Karen G) and TYCKOSON (David A). Browsing with sound : Sound-based codes and automated authority control. Inf Tech Lib. 4, 2; 1985, Jun; 130-6.
Discusses the use of sound-based codes for authority control and record retrieval. The codes could provide more accurate retrieval for title searching in an online catalog and could be the basis for alternative catalog access points.

125. HANCOCK-BEAULIEU (M). Evaluating the impact of an On-line library Catalogue on subject searching behaviour at the catalogues and at the shelves. J Doc. 46, 4; 1990, Dec; 318-38.
Provides inadequate support for subject searching in on-line ctalogue. Improves retrieval effectiveness, suggested on-line catalogues should cater for both matching and contextual approaches to searching.

126. HILDRETH (C R). Beyond boolean : Designing the next generation of Online Catalogs. Lib Tre. 35, 4; 1987, Spr; 547-67.

Describes online catalog as a new form of the library catalog, succeeding the earlier book, card and COM catalogs.

-,-, ACADEMIC LIBRARIES.

127. PETERS(Thomas A) and KURTH (Martin). Controlled and uncontrolled vocabulary subject searching in academic library Online Catalog. Inf Tech Lib. 10, 3; 1991, Sept; 201-11.

Discusses an academic library online catalog by which users have tried both controlled and uncontrolled vocabulary subject access during the same search session. Continues in the library and information science professions over the relative merit, appropriateness and efficiency of uncontrolled vocabulary subject access in on-line catalog systems.

-,-,-, ILLINOIS.

128. DAUGHERTY (R A). Instructing patrons in OCLC in an academic library. Coll Res Lib. 44, 2; 1983, Feb; 35.

Describes the experiences of the library of the University of Illinois, Chicago in training library patrons in the use of online catalogs. Mentions the searching instructions and programs in on-line catalog system.

-,-, CLASSIFICATION.

129. HILL (Janet Swan). Online classification number access : Some practical considerations. J Aca Libr. 10, 1; 1984, Mar; 17-22.

Describe classification number searching and shelflist browsing capabilities in online catalogues. Considers the priorities for development and implementation.

130. MARKEY (Karen). Subject-searching experiences and needs of On-line catalog users : Implications for library classification. Lib Reso Tech Serv. 29, 1; 1985, Jan/Mar; 34-51.

Contains an experiment in the use of Dewey Decimal Classification in on-line catalogs to introduce the classed approach to the subject searching of library collections, enhance the subject terminology indexed in the on-line catalog.

131. MARKEY (Karen). Searching and browsing the Dewey Decimal Classification in an On-line Catalog. Cata Class Q. 7, 3; 1987, Spr; 37-68.

Analyzes subject access, browsing and display of the DDC schedules and Relative index into on-line catalog. Provides some recommendations for the enhancement of bibliographic records, on-line catalogs and cataloging systems with a library classification.

132. MARKY(Karen) and DEMEYER (A). Dewey Decimal Classification project : Evaluating of library schedule and index integrated into the subject searching capabilities of an On-Line Catalog. Cata Class Q. 7, 3; 1987, Spr; 127-30.
Contains effectiveness of the DDC as a searcher's tools in on-line catalog. Provides subject access, browsing and display in the experimental on-line catalog.

133. BUXTON (A B). Computer searching of UDC numbers. J Doc. 46, 3; 1990, Sept; 193-217.
Discusses a number of online catalogues, databases, and information retrieval packages in terms of their ability to allow searching on UDC numbers. Suggests for enhancing retrieval performance on UDC numbers in simple systems.

-,-, UNIVERSITY LIBRARIES, HOUSTON.

134. FROST (Carolyn O). Subject searching in an Online Catalog. Inf Tech Lib. 6, 1; 1987, Mar; 60-3.
Conducts a survey at the University of Houston that online catalog use at UH-UP confirms findings from previous studies : a display of a list of terms that are related to their search terms would be highly

attractive to users, but a large percentage of users are not aware of LCSH as source of the catalog's subject terms.

-, SERVICE POLICES.

135. TAYLOR (Raymond G). Determining the minimum number of Online terminals needed to meet various library service policies. Inf Tech Lib. 6, 3; 1987, Sept; 197-204.

Library administrators and trustees examines the ptential advantages and costs of converting from card to on-linecatalogs system.

-, SMALL LIBRARIES.

136. PENNINGTON (Jerry). Transitional technology and the small library. Lib Reso Tech Serv. 29. 2; 1985, Apr/Jun; 125-31.

Examines on line catalogues in terms of collection control. Improves access to collections, machine data bases should be built for future on-line catalogues in small libraries.

-, SOFTWARE SYSTEM.

137. LAWRENCE (Gary S). System features for subject access in the Online Catalog. Lib Reso Tech Serv. 29, 1; 1985, Jan/Mar; 16-33.

Describes various ways of software systems for designing on-line catalogs to enhance subject access. Reviews available design techniques from a subject-searching perspective, including various methods of indexing bibliographic records, searching the database and displaying search results.

-, SPECIAL LIBRARIES.

138. FAUST (Julia B). Microcomputers as On-line Catalogs in special libraries. Sp Lib. 77, 3; 1986, Sum; 133-9.

Describes the rational for the conversion of a card catalog to an on-line system in a special library owning approximately 4000 titles. Mentions equipment, software, and procedures in online catalog system.

-,-, ILLINOIS.

139. KNUTSON (Gunnar). Use study of online cataloguing in a special library. Sp Lib. 75, 1; 1984, Jan; 36-43.

Analyzes the cataloguing records of Chicago Municipal Reference Library at Illinois. Indicates special library is cataloguing has a use rate of 42%, compared to a systemise average of 55%.

-, SQL SYSTEM.

140. LEIGH(William) and PAZ (Noemi). Use of SQL and second generation database management systems for data

processing and information retrieval in libraries. Inf Tech Lib. 8, 4; 1989, Dec; 400-7.

Discusses Structured Query Language (SQL), its implementations, associated products, and techniques for its use in on-line catlogues, circulation systems and other library applications. SQL is the result of an American National Standards Institute effort to standardize the language used for quering computer databases.

-, STATE LIBRARY, NEWYORK.

141. LIPETZ (B) and PAULSON (P J). Study of the impact of introducing an Online Subject Catalog at the NewYork state library. Lib Tre. 35, 4; 1987, Spr; 597-617.

Introduces methodology, implementation, subject searches, use instances and user satisfaction in Online subject catalog at the New York state university.

-, STRUCTURES AND APPLICATIONS.

142. ANDRE (P W) and others. Serial control in an On-line integrated system. Can latest entry Cataloguing help? Cata Class Q. 7, 2; 1986, Win; 39-53.

Explains integrated structure of on-line catalog and its applications to serials processing. Allowing bibliographic order, holdings and circulation information in an on-line system.

-, SUBJECT ACCESS.

143. WOLNER (Theresa J). Subject access literature, 1988. Lib Reso Tech Serv. 33, 3; 1989, Jul; 240-7.
Reviews of the subject access literature for 1988 in online environment. On-line public access catalogs brings the result of changes in librarianship and information services.

144. FIELD (Jeffrey). Foreword. Cata Class Q. 6, 4; 1986, Sum; 1-3.
Analyzes the scope of the USNP, enhanced access to newspapers provided by an online catalogs. On-line database and numerous off-line bibliographic products are presented.

145. LIPOW (A G). Practical considerations of the current capabilities of subject access in Online Public Access Catalogs. Lib Reso Tech Serv. 27, 1; 1983, Jan/Mar; 81-8.
Mentions practical consideration of subject access in on-line catalogs and the need for subject cataloging when keyword searching is available.

146. McCARTHY (Constance). Reliability factor in subject access. Coll Res Lib. 47, 1; 1986, Jan; 48-56.
Discusses library community has gained importance experience with on-line catalogs, subject access,

that books on any given topic be brought together consistently under the same subject heading.

147. MITCHELL (Joan S). Subject access to micro-computer software. Lib Reso Tech Serv. 29, 1; 1985, Jan/Mar; 66-72.

Deals with literature of the problems of cataloging micro-computer software, the focus on descriptive cataloguing. Discusses objectives and reports on the problems of subject access to microcomputer software.

-,-, GEOLOGY AND GEOGRAPHY.

148. BINDER (Joan E) and others. Geological/Geographical name subejct access. Inf Tech Lib. 8, 4; 1989, Dec; 208-21.

Narrates studies of on-line catalogues revealed a fundamental change about retrieval of specific information and the vastly increased number of access points is made with on-line catalogues in Geology and Geography. 94% answered on the usage of the on-line catalogue are made.

-,-, LCS.

149. VIZINE-GOETZ (Diane) and MARKY (Karen). Subject access literature, 1987. Lib Reso Tech Serv. 32, 4; 1988, Oct; 337-51.

Describes the development of subject searching and subject authority control in LCS on online library catalog. Suggests some techniques for improving subject access in online catalogs.

-, SURVEY, ACADEMIC LIBRARIES, U.S.

150. CAMP (J A) and others. Survey of On-line systems in U.S. academic libraries. Coll Res Lib. 48, 4; 1987, Jul; 339-50.

Conducts a survey on cataloguing and integrated systems in an on-line systems in U.S. academic libraries. Cataloguing, interlibrary loan,acquisation and serials units are mostly automated.

-,-, OCLC.

151. STRUBLE (C A) and KOHBERGER (P B). Jr. Statistical survey to determine availability of Cataloging copy on OCLC. Cata Class Q. 7, 3; 1987, Spr; 13-22.

Describes cataloging sites for monographs, bibliographical control, search and verification through on-line searching at the university of Pittsburgh. Provides modifications and implementation of on-line catalog system.

-,-, UNIVERSITY LIBRARIES.

152. NYE (Julie Blume). User interaction with the authority structure of the On-line Catalog : Results of a survey. Inf Tech Lib. 7, 3; 1988, Sept; 313-6.

Conducts a survey during 1987 to identify how on-line catalog users interact with various aspects of the catalog's authority control structure. Questionnaries were sent to major on-line catalog system vendors and to selected University libraries and networks known to have developed in house on-line catalogs.

-, SYSTEM.

153. POTTER (William Gray) Expanding the Online Catalog. Inf Tech Lib. 8, 2; 1989, Jun; 99-104.

Services provided by expanding the on-line catalogue are part of a larger set of services. Deals greater connectivity from on-line library systems to other systems , including commercial services, bibliographic utilities, local networks, CD-ROM services and other information providers in the community.

-, TECHNIQUE.

154. MALINCONICO (S M). Listening to the resistance. Lib J. 108, 4; 1983, Feb; 353-5.

Analyzes some of the underlying causes for the resistance to the introduction of computerised techniques to library and information work and on-line catalogue is used as an example.

155. VERNA (Urbanski). Resources & technical services news: CD-ROM takes centre stage. Lib Reso Tech Serv. 32, 1; 1988, Jan; 12-6.
Describes CD-ROM is a rapidly expanding field for libraries. CD-ROM uses a subset of on-line computer library centre's on-line union catalog.

-, TECHNOLOGY.

156. GRAHAM (P S). Technology and the Online Catalog. Lib Reso Tech Serv. 27, 1; 1983, Jan/Mar; 18-35.
Mentions the trends in technology of on-line catalogs and analyzes, size of computers, distributed data bases, optical discs, computer network and communications.

157. NOBLE (G) and CONNOR (S O). Attitudes toward technology as predictors of Online Catalog usage. Coll Res Lib. 47, 6; 1986, Nov; 605-10.
Attempts on distrust and positive acceptance and future usage of on-line public access catalogs. Needs computer literacy programe for OPAC success in the long term. Characterizes discriminant function of OPAC user.

-, UNITED STATES.

158. HARRIMAN (R B). Co-ordination of Cataloguing practices in the United States newspaper program. Cat

Class Q. 6, 4; 1986, Sum; 15-29.

Mentions bibliographic component of USNP comprises co-operative efforts to locate and catalogue in an online system. Contains holding information about database in online systems.

159. CARTER (R). United States newspaper program : Cataloguing aspects. Cata Class Q. 6, 4; 1986, Sum; 1-106.

Describes idea of cataloging through on-line system in United States. Mentions linking titles, updating, planning and search techniques in an online catalog.

-, UNIVERSITY LIBRARIES.

160. POESY (Edwin D) and ERDMANN (Charlotte A). Online UNIX based engineering library Catalog : Purdue University engineering library. Sc Tech Lib. 6, 4; 1986; 31-43.

Contains Unix-based engineering information system by on-line catalog. The search technique is by keywords from an augmented record, actually it includes the edited table of the book.

161. BHULLAR (P). LUMIN user education. Sh Me Lib. 36, 11; 1985, Aug; 13-8.

Describes reader education plan of the University of Missouri libraries to teach the user of libraries of the University of Missouri Information Network through on-line catalogue in 1985.

162. WILSON (R A) and KELLERMAN (L S). Challenges of On-site Cataloguing. Cata Class Q. 6, 4; 1986, Sum; 31-8.

Deals newspaper cataloguing in libraries through on-line at Pennsylvania State University library. Mentions identifying titles, linking titles, updating and gathering holdings data in an online catalog.

163. BECKMAN (Margaret). Online Catalog development at the University of Guelph. Lib Tre. 35, 4; 1987, Spr; 527-37.

Develops and implements automated systems including costs, changing technology and emphasis on local user needs about online catalog at the University of Geulph.

-,-, CALIFORNIA.

164. WATSON (Peter G). Touch-screen versus keyboard terminals for On-line Catalogs. Inf Tech Lib. 2, 2; 1983, Jan; 182-4.

Introduces of on-line catalogues into the libraries of the 19 campus of California State University system and shows they complement each other, the touch screen being more suited for the beginner and the keyboard for the experienced searcher.

165. BRONRIGG (E B) and others. Pocket radio for library automation. Inf Tech Lib. 3, 3; 1984, Sept; 229-44.
Introduces communications system at California University, to transmit data between the on-line catalogue, MELVYL and its terminals.

166. SALMON (Stephen R). MELVYL system and its academic context. Inf Tech Lib. 11, 2; 1992, Jun; 180-1.
Describes MELVYL system in on-line catalog idea of access to the collections and a key recommendations in the plan adopted by the University of California libraries.

167. LYNCH (C A) and BERGER (Michael G). UC Melvyl MEDLINE system : A pilot project for access to journal literature through an On-line Catalog. Inf Tech Lib. 8, 4; 1989, Dec; 371-83.
Explains a three-year pilot project at the University of California to provide access to biomedical and health sciences literature through the integration of part of the National Library of Medicine's MEDLINE database into the University of California's MELVYL on-line catalogue. Introduces some of the current planning efforts for such additional databases, key technical and policy issues at the

centre of the planning process, and the ways in which UC's experience with MELVYL MEDLINE has influenced this planning.

-,-, GEORGIA.

168. LANDRAM (Christina) and ROBINSON (C L). OLLI, Online library information : The installation of the PALS Online Catalog at Georgia State University. Tech Serv Q. 4, 2; 1986, Win; 29-41.

Explains process implementation of on-line catalogues at Georgia State University. Mentions loading the software, introduction to the public, acceptance by the patrons etc. in on-line catalog system.

-,-, MISSOURI.

169. COREY (James F) and SPALDING (Helen H). Involving faculty and students in the selection of a card Catalog alternative. J Aca Libr. 8, 6; 1983, Jan; 328-33.

Discusses specifications, authorities, necessary funds and evaluating bids of an online catalogue system in place of card catalogues at Missouri University libraries.

-,-, ONTARIO.

170. PAWLEY (Carolyn). Online access : User reaction. Call Res Lib. 43, 6; 1982, Nov; 473-7.

Mentions use of online catalogue based on the circulation system at the University of Guelph library in Ontario. Provides user satisfaction and togather information for the design of an on-line catalogue system.

-,-, VENDERBILT.

171. WILSON (Fio). Ariticle-level access in the On-line Catalog of Vanderbilt University. Inf Tech Lib. 8, 2; 1989, Jun; 121-31.

Introduces a locally mounted MEDLINE file into its NOTIS based on-line catalogue at Vanderbilt University library. Database systems, planning, programming, search techniques, key factors are presented.

172. GETZ (Malcolm). Some benefits of the Online Catalog. Call Res Lib. 48, 3; 1987, May; 224-40.

Describes users benefit from on-line catalogue services to complete library work more quickly and by increasing success. Measures gains in searching time, system design at Vanderbilt University in 1985.

-,-, WASHINGTON.

173. FUNABIKI (R T) and others. Use of the WLN authority control system by an ARL library. Lib Reso Tech Serv. 27, 4; 1983, Oct/Dec; 391-4.

On-line authority control system used for the COM catalogue at Washington State University is an effective tool for managing a research library catalogue. The authority file maintenance work is accomplished through the co-operative efforts of librarians in participating network libraries and staff of the WLN bibliographic maintenance unit.

-, UNIVERSITY RESEARCH LIBRARIES.

174. LYNCH (C A). Next generation of public access information retrieval systems for research libraries : Lessons from ten years of the MELVYL system. Inf Tech Lib. 11, 4; 1992, Dec; 405-15.

Analyzes the design assumptions and objectives of the original MELVYL online catalog at the University of California. Provides on searching by authors, subject and title on MELVYL online union catalog.

175. HOLLEY (Robert P). Utah newspaper project. Lib Reso Tech Serv. 31, 2; 1987, Apr/Jun; 177-91.

Describes online catalogue systems, newspaper program at University research libraries of Utah. Mentions planning, phase etc for online system.

-, UNIX SYSTEM.

176. BOYCE (Judith) and BOYCE (Bert R). Serial holding list using UNIX refer. Sp Lib. 78, 1; 1987, 37-40.
Produces resource sharing tools with minimum expense in special libraries. A union list of serial holdings can be performed through the use of readily available software by automated production based on UNIX refer system.

-, USERS.

177. WAYLAND(Sharon). User study of On-line library Catalog. Comm Jr Coll Lib. 1, 2; 1982, Win; 5-19.
Conducts a survey to determine who use the catalogues and how. Mentions waiting time, patron behaviour and overall level of user satisfaction with on-line catalogue.

178. SIEGEL (Elliot R) and others. Comparative evaluation of the technicl performance and user acceptance of two prototype Online Catalog systems. Inf Tech Lib. 3, 1; 1984, Mar; 35-46.

Conducts a comparative evaluation of prototype patron accessible on-line catalogue systems within the same operational environment at the National Library of Medicien (NLM). Describes the research strategy and methods, some aspects of which are unique to the evaluation of on-line systems.

179. CONNELL (T H). User acceptance of library Catalog results : An exploratory study. Lib Reso Tech Serv. 35, 2; 1991, Apr; 191-201.

Discusses user obtained result from an on-line catalogue system than from a manual system. Finding indicate for unquestioning acceptance of the results of a search in on-line system.

180. PEASE (Sue) and GOUKE (Mary Noel). Patterns of use in Online Catalog and a Card Catalog. Coll Res Lib. 43, 4; 1982, Jul; 279-91.

Compares card catalogues with online catalogues for success of patrons in finding titles and success rate in searching titles shows that patron's use in online catalogue increased and card catalogue decreased.

-, USERS INSTRUCTION.

181. BAKER (BETSY). New direction for Online Catalog instruction. Inf Tech Lib. 5, 1; 1986, Mar; 35-41.

Describes surrounding efforts to introduce the on-line catalog to users. Examining practical concerns and stressing the necessity of linking the use of computers in libraries with the use of computers in other facets of life, a new direction for on-line catalog instruction planning will be offered.

182. KILGOUR (Frederick G). Online Catalog revolution. Lib J. 109, 3; 1984, Feb; 319-21.

Describes technological revolution , in the form of computer power, has come to libraries and users have often greeted on-line catalogues. Outlines the purposes of public on-line catalogues and gives suggestions on design and access.

183. BATES(Marcia J). Rethinking subject Cataloging in the Online environment. Lib Reso Tech Serv. 33, 4; 1989, Oct; 400-12.

Introduces new search capabilities in on-line catalogs have different implications for the use of subject cataloging in existing records, the design of thesauri and online catalog user-system interface.

184. BACKMAN (Margaret M). Online Catalogs and library users. Lib J. 107, 19; 1982, Nov; 2043-7.

Describes technological innovation to the manipulation

of bibliographic records in online catalogues for library users. Applies newer system of online catalogue regardless of traditional systems and standards.

-, VERNACULAR LANGUAGES, CJK.

185. WEI (Karen T) and NOGUCHI (Sachie). RLIN CJK versus OCLC CJK : The Illinois experience. Lib Reso Tech Serv. 33, 2; 1989, Apr; 140-151.

Narrates CJK online cataloging is a computer-assisted system designed to handle Chinese, Japanese, and Korean vernacular languages. RLIN and OCLC are two online cataloguing networks presently operational in the United States that have CJK enhancements.

-, YOUTH LIBRARIES.

186. DIXON (R D) and MEYERS (E D). Initial experiences with an Online Catalog at the Boys town centre library. Cata Class Q. 2, 3/4; 1982, 59-76.

The Centre for the Study of Youth development initiated an on-line catlaog of the holdings of its library consists of 10,000 monograph, journals etc in January, 1981. Describes the reactions of the user to the resource and the background of the library automation project.

ON-LINE PUBLIC ACCESS CATALOGUES, A.D.F.A. LIBRARY, AUSTRALIA.

187. BYRNE (Alex) and MICCO (Mary). Improving OPAC subject access : The ADFA experiment. Coll Res Lib. 49, 5; 1988, Sept; 432-41.

Describes a project to upgrade subject access in its on-line public access Catalog (OPAC) by adding an average of twenty one multiword terms from table of contents in the MARC record for each book at the Australian Defence Force Academy (ADFA) library.

-, ACADEMIC LIBRARIES.

188. CRAWFORD (J C) and POWLES (J A). In-house (Locally Generated) subject indexes mounted on academic library OPACs. Lib Rev. 40, 1; 1991, 29-36.

Mentions subject indexes and their operation in on-line public access catalogs at academic library. Subject access, bibliographic records etc. are performed in on-line catalog system.

189. STEVENS (Norman D). Imaginative terminal design for Online Public Access Catalogues. Inf Tech Lib. 8, 1; 1989, Mar; 69-71.

Brings new and unanticipated challenges to imaginations of librarians as throughout American

academic libraries in the late 1980s by on-line public access catalogue. Describes to design, select, implement and expenditures towards replacing the card catalogue with the OPAC.

-, A&M UNIVERSITY LIBRARY.

190. COOK (Collen) and PAYNE (Leila). Intactness and accuracy of On-line and Card Catalogues : ALISII vs. Card Catalog at Taxas A&M University. Inf Tech Lib. 10, 3; 1991, Sept; 163-71.

Compares intactness and accuracy of the public card catalog and a first-generation on-line catalog at Texas A&M University library. The results indicated that the on-line file was marginally less intact and substantially more accurate than comparable card catalogs.

-, ARCHIVAL APPLICATIONS.

191. GILMORE (M B). Increasing access to archival records in library Online Public Access Catalog. Lib Tre. 1988, Win; 609-23.

Describes use of institutional online public access catalog (OPACs). Reviews the utility of call number searching and some possible archival applications and bibliographic descriptions of multiformat archival

materials are available through on-line library catalog.

-, AUDIO-VISUAL.

192. LEE (Newton S). Multimedia visualizer: An animated, object-based OPAC. Inf Tech Lib. 10, 4; 1991, Dec; 297-310.

Analyzes the Multimedia Visualizer, an animated, object based on-line public access catalog (OPAC). The object-oriented and animated visualizations are designed to make the OPAC to use by library patrons of all ages and expertise.

-, BILINGUAL LANGUAGES.

193. SLANTER (Ron). Authority control in a Bilingual OPAC : Multius at laurentian. Lib Reso Tech Serv. 35, 4; 1991,Oct; 422-58.

Discusses bilingual subject authority control and necessary conditions for a bilingual online public access catalog (OPAC) such as reciprocal references in the same file, subject searching in bilingual thesaurus, equivalencies between forms in different languages and access to retrieval from the whole collection in either language.

-, BROWSING.

194. MASSICOTTE (M). Improved browsable displays for On-line subject access. Inf Tech Lib. 7, 4; 1988, Dec; 373-80.

Describes browsing, a subject index is a desirable feature in an on-line public access catalogue, often the display under a specified search term. Many OPACs display a particular subject index term on on-line.

195. BEHESHTI (J). Browsing through Public Access Catalogs. Inf Tech Lib. 11, 3; 1992, Sept; 220-8.

Discusses browsing is a significant aspect of the informtion-seeking activities of library users. Many systems have been designed to enhance the second-generation OPACs for browsing.

-, CHECKLIST, AUTOMATED LIBRARIES.

196. ROURKE (Victoria O). Selection of an Online Public Access Catalog : A checklist approach. Inf Tech Lib. 6, 4; 1987, Dec; 278-87.

Describes an integrated automated library system can be facilitated by using a checklist to evaluate online public access catalog. Development, field testing and evaluations of this approach are discussed and references for using a checklist are outlined.

-, CITATION.

197. FROST (Carolyn O). Literature of Online Public Access Catalogs, 1980-85 : An analysis of citation patterns. Lib Reso Tech Serv. 33, 4; 1989, Oct; 344-57.

Deals on-line public access catalogs (OPACs) for findings of a citation analysis of journal articles published between 1980-85. Findings revealed many characteristics identified with a scholarly or scientific literature.

-, CLR, U.S.A.

198. BISHOP (D F). CLR OPAC study : Analysis of ARL user responses. Inf Tech Lib. 2, 3; 1983, Sept; 315-21.

Indicates nature of the searching capabilities of a given system will affect information users and size, currecy of the data base are major factors in determining overall user satisfaction.

-, DATABASE STAGES.

199. KRANZ (Jack). Writing technical specifications for database automation. Lib Reso Tech Serv. 33, 4; 1989, Oct; 358-65.

Contains librarians with minimal knowledge of library systems applications are findings themselves faced with task of writing technical specifications for various phases of on-line public access catalogs (OPACs).

-, DESIGN.

200. CULKIN (Patrica B). Rethinking OPACs : The design of assertive information systems. Inf Tech Lib. 7, 2; 1989, Jun; 172-7.

OPACs play a pivotal and intellectually sound role in the educational process. In 1960s OPACs came to be as a result of the library community's fascination. In modern telecommunications environments OPACs accomplised several objectives such as materials, medium, structure, educational process etc of users.

-, DEVELOPMENT.

201. KINSELLA (Janet). On-line access tomorrow. Els Int Bul. 1986; 111-7.

Discusses the future & role of on-line public access catalogs (OPACs) in integrated information management system and their maintenance in both practical and economic terms.

-, DOWNLOADING AND PRINTING.

202. HAGEE (J) and BOEWE (K H W). Downloading and printing search results from On-line databases. Inf Tech Lib. 11, 3; 1992, Sept; 305-7.

Describes an on-line public access catalog (OPAC), offers the MEDLINE and ERIC databases on-line

through the Multiple Database Access System (MDAS) developed by NOTIS. Introduces the method to provide patrons a downloading and printing capability.

-,EFFICIENCY.

203. TAYLOR (Christine M) and others. Refinement of a method for determining the optional Interactive Timeout for Interval for OPAC terminals. Inf Tech Lib. 8, 3; 1989, Sept; 295-7.

Affects the efficiency of on-line public access (OPAC) terminals by different factors. Mentions the Interactive Timeout Interval (ITI) for OPAC terminals in ten legitimate working sessions and efficiency of an on-line system by reducing unnecessary polling of terminals to maintain a desired level of service.

-, INDEXING.

204. ALIPRAND (Joan M). Nonroman scripts in the bibliographic environment. Inf Tech Lib. 11, 2; 1992, Jun; 105-19.

Discusses a survey on the indexing of on-line public access catalogues included questions on two directional marks and two letter/diaeritic combinations.

-, INFORMATION SYSTEM.

205. ENSOR (Pat). Diversity informaion Online : The development of a CIF-Based database. Inf Tech Lib. 11, 4; 1992, Dec; 384-7.

Gives information system at ISU (Indiana State University) library on online public access catalogue. Makes additional bibliographic databases available alongside the OPAC, using the same searching commands.

-, KEYWORD INVENTORY, UNIVERSITY LIBRARIES, ADELPHI.

206. BALLARD (Tery) and LIFSHIN (Arthur). Prediction of OPAC spelling errors through a keyword inventory. Inf Tech Lib. 11, 2; 1992, Jun; 139-45.

Discusses to find and correct spelling errors in the online public access catalog at Adelphi University, a visual impection was performed of the 1,17,000 keywords indexed in the system. More than 1,000 errors were found. Most ofthe records were derived from bibliographic utilities, so the findings can be generalized to other OPACs.

-, PERFORMANCE.

207. CRAWFORD (Walt). RLIN command analysis system : Measuring use and performance of an Online system. Inf Tech Lib. 4, 1; 1985, Mar; 29-51.

Analyzes the RLIN command system digests large quantities of raw data on RLIN use and performance into smaller quantities of information. Lessons learned be useful for performance of the online public access catalogs.

-, PLANNING, UNIVERSITY RESEARCH LIBRARY, OHIO.

208. HANSON (Heidi) and PRONEVITZ (Gregory). Planning for resprospective conversion : A simulation of the OCLC TAPECON service. Inf Tech Lib. 8, 3; 1989, Sept; 284-94. Presents the results of a simulation of OCLC's TAPECON restrospective conversion service and its impact on an OPAC in a large university research library. Ohio state university libraries, OPAC, contains a total of about 2.6 million records. Analyzes the use of the LCCN search key and its probable impact on a local OPAC.

-, PRINTING, UNIVERSITY LIBRARIES.

209. PEPIN (Theresa) and WISE (D T). Printing and the Online Catalog. Inf Tech Lib. 6, 3; 1987, Sept; 221-3. Describes planning for OPAC printers at the University of Tennessee. Reviews the literature and selected oneline catalog sites revealed a dearth of printer needs assessment studies and how best to provide for printing from the on-line catalog.

-, RESEARCH, U.K.

210. KINSELLA (Janet) and BRYANT (Philip). Online Public Access Catalog reserch in the United Kingdom : An over-

view. Lib Tre. 35, 4; 1987, Spr; 619-29.

Conducts a research on an online access catalog in the United Kindom. On-line public access catalog depends on technical performance, interface design and quality of the database.

-, RESOURCE SHARING.

211. PARSONS (J L). Online Public Access systems : An overview. Tech Serv Q. 1, 4; 1984, Sum; 41-9.

Describes advantage of the on-line public access catalog. Mentions typical search procedure and resource sharing through OPACs.

-, SEARCHING.

212. COUSINS (S A). Enhancing subject access to OPACs : Controlled vocabulary vs natural language. J Doc. 48, 3; 1992, Sept; 291-309.

Suggests method of controlled vocabulary vs natural language for enhancing the subject content of OPAC records. Improves subject searching facilities of online public access catalogues.

213. KASKE (Neal K). Variability and Intensity over time of subject searching in On-line Public Access Catalog. Inf Tech Lib. 7, 3; 1988, Sept; 273-87.

Contains percentage of subject searching (flow of 35% to a high of 52% over the weeks of the semester) in an

on-line public access catalogue at a University library. Variability for hours of the day ranged from 49% to 55%. Provides management information on the general utilization of the OPAC studied through numerous charts and graphs.

-,-, ACADEMIC LIBRARIES.

214. ENSOR (Pat). User practices in keyword and boolean searching on an Online Public Access Catalog. Inf Tech Lib. 11, 3; 1992, Sept; 210-9.

Describes keyword and boolean searching models are available on on-line public access catalogs and questions have arisen regarding their use by library patrons. Provides answer to the questions in the context of an academic library that uses the Northwestern Online Total Integrated System (NOTIS) online catalog.

-,-, CLR.

215. FERGUSON (D) and others. CLR Public Online Catalog study : An overview. Inf Tech Lib. 1, 2; 1982, Jan; 84-97.

Mentions a co-ordinate study of user responses to public on-line catalogues in the organisation founded by CLR. A questionnaire completed at the terminal by catalogue users and another questionnaire completed in the library by individuals who not used the computer catalogue.

-, —— , PUBLIC LIBRARIES, U.K.

216. SLACK (Frances) and WOOD (Anthony J). Subject searching on British OPACs : Problems and progress. Lib Rev. 39, 6; 1990; 41-9.

Discusses subject searching is an important part of OPAC development in public libraries in the UK. OPACs needs for good interfaces, clear instructions and common command language provision to assist the users.

-, —— , RESEARCH LIBRARY, ISRAEL.

217. LAZINGER (S S) and PERITZ (B C). Reader use of a nation wide research library network : Local OPAC vs remote files. Inf Tech Lib. 10, 3; 1991, Sept; 192-200.

Examines readers conducting bibliographic searches in Israel's research library and ALEPH-tend to search only within the OPAC of the library within they are working or they are accessing the remote OPACs of other libraries.

-, —— , UNIVERSITY LIBRARIES.

218. KASKE (Neal K). Comparative study of subject searching in an OPAC among branch libraries of a University library system. Inf Tech Lib. 7, 4; 1988, Dec; 359-72.

Describes degree of variability in the percentage of subject searching in an on-line public access catalog (OPAC) among branch libraries of one university. Valuable management information on the utilization of the OPAC within each branch library and among all the branch libraries is provided through numerous charts and graphs.

-, UK AND WEST GERMANY.

219. SCHNELLING (Heiner). Online Public Access Catalogues in the UK and West Germany - present and future trends. J Libr.19, 4; 1987, Oct; 244-57.

Compares on-line public access catalogues in the West German situation with UK. Describes the strengths and weaknesses of UK OPACs and some of the difficulties impeding the introduction of OPACs in West-Germany.

-, UNIVERSITY LIBRARIES.

220. DEHART (F E) and MATTHEWS (K). Catalog department's legacy to OPAC subject searchers. Tech Serv Q. 4, 1; 1986; 3-10.

Gives more options for the fulfilment of information of subject searching by on-line public access catalogues (OPACs) in University libraries. Searching is depends

on database. Catalogue departments policies and practices are referred for making the user's approach to on-line subject searching.

-, UNIVERSITY LIBRARY, CENTRAL FLORIDA.

221. SCHARF(Meg) and WARD (Jeannette). Side by side: Users react to a second Online Public Access Catalog. Lib Tre. 37, 4; 1989, Spr; 402-13.

Develops an ongoing instruction program for using a second online public acess catalog at University of Central Florida (UCF) in 1987. Indicates at UCF, users readity adapted to overlapping technology.

-, USERS PATRONS.

222. MARKEY(Karen). Thus spak the OPAC user. Inf Tech Lib. 2,4; 1983, Dec.; 381-7.

The U.S. council on Library Resources (C L R) provided the funding to enable 5 organisations to conduct a study of library users and on-line public access catalogue (OPACs). Concludes that patrons of on-line catalogues although they do have problems of subject access.

-, USERS STUDIES.

223. ROCHESTER (Maxine K). ABN database : Sampling strategies for collection overlap studies. Inf Tech Lib. 6,3; 1987, Sept.; 190-6.

Analyzes advent of online public access catalog (OPAC) for databases, location for materials which are important for the invisible users of such catalog acessing the database from their home or office computers.

-, VIDEODISC SYSTEM.

224. KELLY(S A).Use of a laser videodisc system: Attitudes. Cell Res Lib. 49, 4; 1988, Jul; 357-61.

Analyzes acceptance and evaluation of the VTLS on-line public access catalog (OPAC). Mentions users attitudes to-ward OPACs system.

ON-LINE UNION CATALOGUES, CONSISTENCY.

225. CHAN(L M). Inter-Indexer consistency in subject cataloging. Inf Tech Lib. 8, 4; 1989, Dec.; 349-59.

Presents, perfect matches about on-line catalogue, approximately 500 records prepared an entered into the OCLC on-line union catalogue during 1986. Subject access catalogues, inter-indexer consistency, will be pursued by interested investigators.

-, LIBRARIES, CANADA.

226. BRODIE(Nancy E). Canadians use a Bilingual union catalogue as an Online Public Catalog. Lib Tre. 37,4; 1989, Spr; 414-31.

Describes an on-line catalog is use in the Canadian federal government, based on the DOBIS library management system and end users in several federal libraries access this. Cantains some special aspects in the literature an online public access catalogs.

-, LIBRARY OF CONGRESS,

227. PREECE(Barbara G) and FOX (Mary Anne). Preliminary LC records for monographs in OCLC. Inf Tech Lib. 11, 1; 1992, Mar; 3-9.

Presents OCLC's decision to load library of congress cataloguing for monographs into the on-line union catalog resulted in the additon of a considerable number of records to the database over a fifteen-month period before the project was suspended in March 1991.

-, NETWORK, HEALTH SCIENCE LIBRARY.

228. HAMMELL (Kathryn A) and GOLDBERG (Kay). Evolution of an Online Union Catalog : Impact of User feedback. Inf Tech Lib. 4, 2; 1985, Jun; 162-8.

Presents, Midwest Health Science Library Network (MHSLN) began operating a regional online catalog and interlibrary loan system with fonding from the National Library of Medicine in 1982.

-, REGIONAL LIBRARY, LONDON.

229. PLAISTER (J M). Alternatives and Options: The LASER experience. Cata Class Q. 2, 1/2; 1982; 93-101.

Examines the development of the London and South-Eastern regional library system (LASER) in online union catalogue and provides parallel systems viz. BLAISE and SCOLCAP for online union catalogues.

-, RESOURCE SHARING.

230. RODGERS (Linda). University of London's Union list of serials. Aslib Proc. 34, 4; 1982, Apr, 193-7.

Narrates some problems about resource sharing among the GO schools and discusses development of the University's online union catalogue in regard to rules, system, choice program etc.

-, SUBJECT ACCESS.

231. CABELLO-ARGANDONA(R) and Others. Subject access for Hispanic library users. Lib J. 107, 14; 1982, Aug; 383-5.

Attempts to produce on-line union catalog of langauge books with Spanish subject access and reviews progress to date together with plans for expansion in the direction of non-bibliographic information.

-, UNIVERSITY LIBRARIES, CALIFORNIA.

232. FERL(Terry Ellen) and MILLSAP (Larry). Remote use of the University of California MELVYL library system: An on-line survey. Inf Tech Lib. 11, 3; 1992, Sept; 285-300.

Presents the results of a survey of users who access the University of California's on-line union catalogue, the MELVYL library system. Includes descriptive statistics on user location, status, subject interest, affiliation, need for assistance and desire for new features.

PART - THREE

ALPHABETICAL INDEX

LIST OF SUBJECT HEADINGS USED

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AUTHOR INDEX

'C'

'M'

TITLE INDEX

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